THE
PEDAGOGICAL SEMINARY

Founded and Edited by G. STANLEY HALL

VOL. XXIX MARCH, 1922 No. 1

SOME DATA ON ANATOMICAL AGE AND ITS RELATION TO INTELLIGENCE[1]

BY FRANCES LOWELL, PH. D., Indianapolis Normal School
AND
HERBERT WOODROW, PH. D., University of Minnesota

The data here discussed consist of radiographs of the hands and wrists of 402 Minneapolis and St. Paul school children, varying in age from 5½ to 11½ years, inclusive. A record of the number of permanent teeth was also made, except in the case of the children constituting the 10½-year group.[2] Individual intelligence examinations by the Kuhlmann 1917 revision of the Binet tests[3] were given to all the children. The data obtained in this investigation, which is regarded simply as a preliminary survey, permit of the calculation of correlations only in the case of the 7½-year and 10½-year children, because at these ages alone did the children used constitute sufficiently large or sufficiently unselected groups. These two age groups, numbering about one hundred each, were unselected in the sense that each of them included all the children of the particular age in question in some one school building, with the exception of a few children, who, for one reason or another, were absent from school on the days when children were taken to the hospital where the radiographs were made. The children of the remaining age groups, that is,

[1]The writers gratefully acknowledge their indebtedness to the following persons: Mr. Severson, principal in the Minneapolis Public Schools; Miss Taylor, principal in the St. Paul Public Schools; Miss Arthur, formerly of the St. Paul Public Schools, now Psychologist in the public schools of Chisholm, Minn.; and Dr. Holliday of the University of Minnesota College of Dentistry.

[2]Ages were recorded in months. By the 10½-year group is meant all the children of the ages 10 years 0 months to 10 years 11 months, inclusive; similarly, for all the other age groups.

[3]*The Measurement of Mental Development*, a school publication, Faribault, Minn., 1917.

of all except the 7½- and 10½-year groups, were selected on the basis of normality of mental age, fifty at each age, divided equally between the two sexes. These groups of fifty were used, in a manner to be described, to help in estimating the anatomical age of the 7½- and 10½-year groups.

The radiographs were studied in groups, a separate group being made at each age for each sex. The radiographs of each of these age and sex groups were arranged in order from the best developed to the least developed. This ranking, though primarily for the purpose of obtaining the medians of the various groups, was done throughout with all possible care so that it could be used in calculating correlations by the rank-difference method. In this ranking, the surface area of all the carpal bones, as they appeared in the radiograph, was given much weight, but was by no means the sole factor considered; for the shape of the bones, the number of bones, which bones, and their area relative to the total area of the wrist, or their compactness, seemed likewise to be factors of fundamental importance. At this stage of the investigation it seemed best, not to attempt the exceedingly difficult problem of weighting all these factors mathematically, but to make a judgment on the basis of general impression. That such judgments can be made with a high degree of reliability is proved by the almost complete agreement between two rankings of the one hundred 10½-year olds, one of which was made jointly by Mr. Severson and one of the writers,[4] and the other by Professor Richard Scammon of the department of anatomy of the University of Minnesota. The two rankings, it is true, were not, in the technical sense, "independent" rankings, since the second was made simply as a review of the first; but the second ranking was made with all possible care and thoroughness and resulted in an agreement with the first that was complete except in four cases. Of these four, none was changed more than three places, in the ranking from first to one-hundredth.

After the radiographs of each age and sex group had been ranked, the median of each group was chosen and used as a norm. Norms were thus secured for each sex from the ages of 5½ to 11½, inclusive. These norms constitute a scale for the measurement of carpal development, or "carpal age." No one having yet published a scale suitable for such measurements, it was necessary for us to obtain such a scale in

[4]The radiographs of the 10½-year olds were used as a part of the data of an unpublished thesis by Mr. Severson, and have also been discussed elsewhere by one of the writers (Woodrow: "Brightness and Dullness in Children," 1919, p. 115).

order to appraise the carpal age of the children composing our 7½- and 10½-year groups.

Since the highest norm in our scale was that of the 11½-year girls, the scale could not be applied to the measurement of the carpal age of the uppermost portion of the 10½-year group. The carpal age of these advanced children was, however, carefully estimated by a method of exterpolation; that is, by assuming that at and beyond the upper end of our scale, differences in carpal development which appear equally marked to the observer represent equal differences in age. By this method we estimated the carpal age of the most advanced child of the 10½-year group, a girl, to be about that of a normal girl of 12¾ years; and by the same method we graded to one-quarter of a year those radiographs showing a development intermediate between that of this most advanced child and our 11½-year norms. These estimated carpal ages were used simply for the purpose of calculating certain correlations; and since all the children were correctly ranked altogether apart from these estimates, our conclusions would certainly not be materially affected by any possible inaccuracy in the magnitude of the absolute ages we attached to the carpal development of these children composing the uppermost portion of the 10½-year group.

While the scale of anatomical age here used is regarded simply as a tentative one, it may be useful to others for comparison with the present findings. It may be summarized briefly as follows:

BOYS	GIRLS
5½ yrs.: 5 carpals. One of them very small; no ulnar epiphysis. Surface area of bones: 2.9 sq. cms.	7 carpals. Ahead of 6½-yr. boy in that 2 of the 4 small carpals are definitely larger; no ulnar epiphysis. Surface area of bones: 3.4 sq. cms.
6½ yrs.: 7 carpals present, but two of them very small; no ulnar epiphysis. Surface area of bones: 3.1 sq. cms.	Has an ulnar epiphysis extending about ¼ the distance across the end of the ulna; 7 carpals, all fair size. Surface area of bones: 4.6 sq. cms.
7½ yrs.: Slightly behind the girl of 6½ in that he has a smaller ulnar epiphysis (⅞ width of ulna)—but well above 5½-yr. girl in that he has an ulnar epiphysis whereas the latter has none. Surface area of bones: 5.7 sq. cms.	Ahead of 6½-yr. girl in that she has an ulnar epiphysis about ⅜ width of ulna and slightly better development of remaining bones. Surface area of bones: 6.1 sq. cms.
8½ yrs.: About equal to 7½-yr. girl except has larger space	Shows same kind of difference from 7½-yr. girl as the latter

between os magnum and unciform. Has an ulnar epiphysis about ⅝ width of ulna. Surface area of bones: 5.9 sq. cms.	from the 6½-yr. girl; namely, larger ulnar epiphysis and better development of all the other bones including radial epiphysis, and approach towards radial union. Shows a point of contact between ulnar epiphysis and ulna, and good development, with over-lapping, of the trapezium and the trapezoid. Surface area of bones: 7.8 sq. cms.
9½ yrs.: Not much different from 8½-yr. boy, except definitely larger and more oval ulnar epiphysis and less space (little or none) between the os magnum and unciform. Surface area of bones: 6.1 sq. cms.	Large, heavy epiphyses, radial epiphysis touching shaft, with a bare suggestion of an ulnar styloid. Differs from preceding simply in better development of all the bones, but particularly in better development of ulnar epiphysis. Surface area of bones: 9.1 sq. cms.
10½ yrs.: Slightly below 9½-yr. girl but well ahead of 8½-yr. girl in epiphyseal development, particularly of the ulna, and in general development of the carpals. Surface area of bones: 8.9 sq. cms.	Well-developed ulnar styloid and a small pisiform. Surface area of bones: 9.7 sq. cms.
11½ yrs.: Has no styloid or very poor one, and in general is well below 10½-yr. girl, particularly as regards epiphyseal development; bare suggestion of a pisiform. Surface area of bones: 9.6 sq. cms.	Good-sized pisiform, with some progress in ulnar union; high degree of compactness. Surface area of bones: 10.3 sq. cms.

The method of measuring the development of the teeth needs little description. It was very simple, consisting merely in the determination of the number of permanent teeth which had erupted. A tooth was counted only if it had broken through the gum. In the case of the 10½-year group, data on teeth were not obtained.

Before presenting the various correlations which were calculated, we shall briefly indicate the range of distribution in anatomical age of the 7½- and 10½-year groups, and describe the extent of sex differences. Data on these points will serve to emphasize the practical importance of a knowledge of the relationship of anatomical age to intelligence.

The variation in anatomical development of children of the same chronological age is very great. In the 7½-year group, the most advanced child (who, as in all the age groups, was a girl) had an anatomical age about equal to that of the median boy of 11½ years, and the least developed child in the group (who, by way of exception, was also a girl), an anatomi-

cal age slightly below that of a median boy of 5½ years. The radiograph of the former showed a well-developed ulnar epiphysis, with a good styloid process and a good development of all the carpal bones except the pisiform, which was still lacking. The hand of the latter had no sign of an ulnar epiphysis and in addition completely lacked three of the carpals—the trapezoid, the trapezium and the scaphoid.

In the 10½-year group, the most advanced, a girl, had a hand well in advance of that of the median 11½-year girl. Our data, as already explained, do not permit us to state with definiteness, in terms of years, development beyond the age of 11½ years, but we estimate the carpal development of our most advanced 10½-year girl to be equal to that of the median girl of 12¾ years (probably about equal to the median boy of 14¾ years). The least-developed wrist in this group, that of a boy, was found to be no better developed than that of the median boy of 7¾ years. Thus, the 7½-year chronological age group covered a range of about 6 years, and the 10½-year group one of about 7 years, of carpal age as measured by boys' norms.

In the 7½-year group, the largest number of permanent teeth possessed by any child was sixteen and the smallest number, one. There was just one child at each of these extremes. For the 10½-year group, as already stated, data on teeth were not obtained.

The importance of such enormous variations as those just cited, in the anatomical age of children of the same chronological age, becomes obvious when it is remembered that our comparisons of children are usually based upon age. Whether a child should be classed as bright or dull, for example, depends upon his mental ability as compared with other children of the same age. Since the variations in anatomical age we have found are those found in groups of only one hundred ordinary school children, it is clear that the substitution of anatomical age for chronological age would radically transform any ranking of the brightness or dullness of the children composing such groups as school classes, or age or grade groups.

Sex differences, according to the present data, were found to be of the same striking degree one should expect from the investigations of Pryor[5] and of Bean.[6] Their extent is in-

[5] *Bulletins of the State College of Kentucky:* 1905, "Development of the Bones of the Hand," pp. 30; 1906, "Ossification of the Epiphyses of the Hand," pp. 35; 1908, "The Chronology and Order of Ossification of the Bones of the Human Carpus," pp. 24.

[6] "The Eruption of the Teeth as a Physiological Standard for Testing Development," *Ped. Sem.*, vol. XXI, 1914, pp. 596-614.

dicated briefly in Table I, showing that girls, even at the early age of 5½ years, are 1½ years older anatomically than boys. On account of the large sex differences the distribution of children of the same chronological age in anatomical age, whether measured by the number of teeth or by carpal development, is very definitely bimodal.

TABLE I

SEX DIFFERENCES IN ANATOMICAL AGE

Number of children in the groups was as follows: 7½ yrs., 40 boys, 62 girls; 10½ yrs., 46 boys, 54 girls; remaining yrs., 25 boys and 25 girls.

Median Carpal Age of Girl	Equivalent Age of Median Boy	Difference
...	5.5	...
...	6.5	...
5.5	7.0	1.5
6.5	8.0	1.5
7.5	8.75	1.25
8.5	10.25	1.75
9.5	11.5	2.0
10.5	....	...
11.5	13.5 (estimated)	2.0 [?]

AVERAGE NUMBER OF PERMANENT TEETH

7½-yr. girls, 9.6
7½-yr. boys, 8.2

The existing data on dentition, carpal development and pubescence all indicate that anatomically the girl is at all ages older than the boy. The question might arise whether this indication was not contradicted by the fact that boys are superior to girls in height and weight at all ages except those near the age of puberty. Height, in particular, it might be argued, being practically nothing but another name for skeletal length, should not contradict the findings as regards the development of the wrist bones; and, even if it did so, it might be urged, it would have just the same claim to be used as a measure of anatomical age as has degree of carpal development. The apparent contradiction disappears as soon as we consider the proper meaning of the term anatomical age. Anatomical age means always a stage or a proportion, and not an absolute amount. A child is advanced in anatomical age if he has completed a large proportion of his final anatomical development. In the case of height, we cannot tell whether a child has completed a large proportion of his final development because we do not know what his final height will be. In the case of the carpal bones and of the teeth we are better off, because in these cases we can readily determine

what stage the child has reached in a known series of stages. It is true, the child may never complete all the stages—for example, he may never acquire his wisdom teeth; nevertheless, unless all the stages are completed, development is incomplete. On the other hand we cannot say of a given child that his development is incomplete if he does not reach some designated height or weight.

The superior value of a knowledge of stage as compared with simple amount of development is shown in the fact that both carpal development (judged in the manner described above) and the number of permanent teeth correlate definitely higher with intelligence than do simple height or weight. For example, in the case of the group of 10½-year children included in the present study, the correlation between carpal development and the intelligence quotient was found to be 30% for the boys and 40% for the girls, while the correlation with height was found to be only 8% for the boys and only 12% for the girls.

In the case of a large group of children, we may, of course, assume that the final height will not differ greatly from established adult norms. It is possible, therefore, to use height as a measure of anatomical age in the case of very large groups—a possibility of little practical significance, however. But even in the case of large groups it is not absolute height which should be taken as the measure of anatomical age, but the percentage of the final normal height which has been attained.

Now, if we turn to the published norms for height of boys and girls, we find that at all ages the girls have completed a larger proportion of their final height than have the boys. In other words, when height is used in the only way it properly can be used as a measure of anatomical age, it shows the girls at all ages ahead of the boys. For example, according to the data of the English Anthropological Committee,[7] the final height of males is about 67.7 inches and that of females, 63.0 inches. At the age of 7½ the absolute height of girls is given as 44.5 inches, and that of boys as 46.0 inches. Accordingly, the girls of 7½, we may calculate, have completed 70.6% of their final height while the boys have completed only 68.1% of theirs. The difference between 70.6% and 68.1% may not seem great, but it is well over an additional year before the percentage completed by the boys equals 70.6%. At 8½ they have completed only 70.0%. At the age of 7½ years, then, girls are over a year of boy's height ahead of the boys! Simi-

[7] "Report of the Anthropometric Committee of the British Association for the Advancement of Science," p. 294.

lar calculations may be made for the other ages. Thus we find that 10½-year girls have completed 81.1% of their final growth, while boys two years older, those of the 12½-year group, have completed scarcely more than the same percentage, namely, 81.4%. One could hardly expect more perfect agreement with the data on sex differences in carpal development.

The fact that girls at all ages excel boys of the same age in the proportion of their final height and weight which they have attained has not hitherto been emphasized. It appears to be fully as significant as the fact that boys are superior to girls in absolute height. At any rate, it does away with the apparent contradiction between data on height and the fact that the anatomical age of girls is at all chronological ages superior to that of boys.

The chief object of the present investigation is the determination of the correlation between anatomical age and mental ability as measured by means of the individual intelligence tests. Since, however, the school grade attained by children of the same chronological age reflects their mental ability to a considerable degree, it is interesting to observe to what extent school grade is affected by anatomical age. The relations found are shown, for both the 7½- and the 10½-year groups, in Table II. In this table all carpal ages are given in terms of the measuring scale made by the boys' norms—that is, in terms of the carpal age of boys. Should the reader desire to transform the carpal ages given for the girls into the carpal ages that would be obtained by using the girls' norms as a standard, he may do so without serious inaccuracy by subtracting two years from the carpal ages given in Part A, and 1.3 years from those given in Part C. For example, the average carpal age of 10½-year girls in the fifth grade is given in Part A as 12.8 years of boys' carpal age. The average carpal age of this group in terms of girls' carpal age is 10.8 years.

TABLE II

ANATOMICAL AGE AND SCHOOL GRADE

A. 10½-Yr. Group

School Grade		B4	A4	B5	A5	B6	Av.
Av. carpal age (boys' norms)	Boys	10.8	9.5	10.9	9.0	12.0	10.4
	Girls	12.0	12.2	12.3	12.8	13.3	12.3
	Both	11.5	10.9	11.7	11.5	12.4	....
No. of cases	Boys	8	18	14	2	4	46
	Girls	13	18	17	4	2	54
	Both	21	36	31	6	6	100

B. 7½-Yr. Group

School Grade	Below B2	Modal Grades B2	A2	Above A2
Av. carpal age	7.7	8.1	8.5	8.5
Av. No. teeth	8.1	8.8	9.2	10.6
No. of cases	21	37	27	17

C. 7½-Yr. Group in Detail

School Grade		Kg	B1	A1	B2	A2	B3	A3	A4	Av.
Av. carpal age (boys' norms)	Boys	8.3	8.5	6.3	7.6	7.4	6.4	10.3	...	7.5
	Girls	...	8.0	8.1	8.5	9.3	9.4	9.0	6.7	8.7
	Both	8.3	8.2	7.5	8.1	8.5	8.5	9.7	6.7	...
Av. No. teeth (permanent)	Boys	8.0	10.0	7.6	7.6	8.6	9.3	11.5	...	8.2
	Girls	...	8.7	7.8	9.8	9.6	11.4	9.5	9.0	9.6
	Both	8.0	9.0	7.7	8.8	9.2	10.8	10.5	9.0	...
No. of cases	Boys	1	2	5	16	11	3	2	0	40
	Girls	0	3	10	21	16	7	2	3	62
	Both	1	5	15	37	27	10	4	3	102

In Part A, which deals with the 10½-year group, the girls show a regular, but very small, increase in carpal age with school grade. The boys of this group, however, give no evidence of a relationship between carpal age and school grade, except for the sole fact that the four boys in the highest grade, the B6, average decidedly the highest in carpal age.

Parts B and C of Table II show the situation with respect to the 7½-year children. Part B shows the data tabulated in a way which we regard as misleading, but which enables us to compare our results more easily with those obtained by other investigators. It seems to show a very decided relationship between school grade and both carpal development and the number of permanent teeth. Thus, it enables us to say that the 7½-year children who are in the grades above the modal grades, *i.e.*, above the grades in which the largest number of children are found, average eight-tenths of a year of boys' carpal age above those who are below the modal grades. It indicates further that the children above the modal grades possess on the average 1.6 teeth more than those in the modal grades and 2.5 teeth more than those below the modal grades. Our findings are thus in harmony with those of Bean, who sums up his results in the statement that children above the modal grades have an average of eight-tenths of a tooth more than those who are in the modal grade, while the latter have nine-tenths of a tooth more than those who are below the modal grade.[8]

[8] *Ped. Sem.*, vol. XXI, 1914, p. 613.

The relation between school grade and anatomical age, shown so definitely in Part B of Table II, seems to melt away when the same data are tabulated more in detail, as they are in Part C. Here the data on the 7½-year group are presented separately for each sex and each school grade. As a result, there appears to be no definite relation between anatomical age and school grade, except for the fact that among those children so advanced as to be in the third grade there is a group of children decidedly above the average both in number of permanent teeth and in carpal development. However, the three girls in the highest school grade, the A4, average only 6.7 years in anatomical age—lower than the children of any other group! Likewise, they possess on the average only nine permanent teeth—a lower number than that possessed on the average by the girls of any other grade above the A1 grade.

In Table III are presented the coefficients of correlation between intelligence, as measured by the individual intelligence tests, and anatomical age, as measured by either carpal age or the number of permanent teeth, or by both of these taken together. The coefficients were calculated by the product-moments method ($r = \frac{\Sigma x y}{n. \sigma x. \sigma y.}$). The probable errors of the coefficients are given in parentheses. For the purpose of calculating the coefficients, the carpal age of all the children was reckoned in terms of the carpal development of boys. The correlations would be practically identical if we had reckoned it, instead, in terms of the carpal development of the girls. The grading as regards the development of the teeth was accomplished, as already explained, by noting the number of permanent teeth erupted. Anatomical age as measured by both carpal age and the number of permanent teeth ("bones and teeth" in the table) was obtained by averaging the deviations of each child from the average of his age and sex group in the two anatomical traits in question, after having first expressed these deviations in terms of the standard deviations of the distribution. Thus, a child who was one times the standard deviation above the average in carpal age, and two times the standard deviation above the average in number of permanent teeth, would be graded as +1.5 in "bones and teeth."

In calculating the correlations with intelligence, it seemed desirable to use the intelligence quotients of the children rather than their mental ages. By so doing, in the present case, one eliminates any correlation due to variation in chronological age within the age groups. It must be remembered

that both the 7½-year and the 10½-year groups included children varying in age throughout a range of twelve months. Since, further, both groups showed a small correlation between chronological age and both mental and carpal age, correlation between the latter two might be due to the fact that the age groups, instead of being strictly homogeneous as regards age, varied throughout this range of twelve months. Since, however, the I. Q. measures intelligence independently, or in abstraction from, chronological age, we eliminate the influence of chronological age entirely by using the I. Q. in place of the mental age.

TABLE III

A. Correlations between I. Q. and Anatomical Age

Probable errors in parentheses

Age and Sex Group	7½-Yr. Girls	7½-Yr. Boys	10½-Yr. Girls	10½-Yr. Boys
r, carpal age with I. Q.	.23 (.09)	.15 (.10)	.41 (.07)	.30 (.10)
r, teeth with I. Q.	.12 (.09)	.21 (.09)	.....	.....
r, bones and teeth with I. Q.	.22 (.09)	.29 (.09)	.....	.....

B. Correlations between Carpal Age and Number of Permanent Teeth

7½-yr. girls, r = + .20 (.09)
7½-yr. boys, r = — .03 (.10)

The coefficients of correlation finally obtained speak for themselves. To the writers they seem small—disappointingly so. Only one of the eight coefficients given in the table is over four times its probable error. On the other hand, the coefficients are without exception positive. While the data are hardly extensive enough to make any very reliable comparison between the two age groups, it is noteworthy that the two correlations obtained with the 10½-year group (between carpal age and I. Q.) are both larger than any obtained with the 7½-year group.

Extremely interesting and somewhat surprising are the low correlations found between carpal age and the number of permanent teeth in the 7½-year group. In the case of the boys, the correlation was, in fact, found to be slightly negative. Yet Table III shows that with 7½-year boys the correlation between number of teeth and intelligence is higher than that between carpal age and intelligence. In the case of the girls, the correlation obtained with teeth was not as high as that with carpal development; but taking the results for both sexes into consideration, there is little difference between the carpal bones and the teeth as regards the correlations shown with intelligence. In short, Table III indicates that if we judge the value of a measure of anatomical age by the criterion of cor-

relation with intelligence, the number of permanent teeth is just as good an indicator of anatomical age as is the degree of carpal development. Now, clearly, if the teeth and the carpus are equally good indicators of anatomical age, and if yet these two show only a very poor correlation with each other, a really adequate measure of anatomical age should be based upon both factors taken together. This conclusion is substantiated by the fact that, considering the results for both sexes, our correlations are definitely the highest when we use an amalgamation of the carpal and dental development as the measure of anatomical age. But again, even at best, they are low—at least from the point of view of practical usefulness.

The very low correlation obtained between the carpal development and the number of permanent teeth in the 7½-year group seemed an important enough matter to justify our seeking subsidiary data from the remaining age groups. The remaining age groups consisted of only twenty-five cases of each sex, and consequently the correlations obtained with them are not very reliable. They could not be used at all for the purpose of calculating correlations with intelligence, for they were selected on the basis of normality of intelligence. It is not apparent, however, that this manner of selection would greatly affect the correlation between number of teeth and carpal development, it being the general rule that a group chosen for the study of the correlation between any two factors should be as homogeneous as possible as regards all other factors. In calculating the correlations in the case of these groups the rank-difference method was used. As already stated, the roentgenographs of each group were in the first instance ranked from best to worst. The correlations obtained are presented in Table IV, in the column headed Q.

TABLE IV

CORRELATIONS BY THE RANK-DIFFERENCE METHOD BETWEEN CARPAL DEVELOPMENT AND NUMBER OF PERMANENT TEETH

Age Group	Q
6½-yr. girls	+ .30
6½-yr. boys	+ .20
7½-yr. girls	+ .23 (r = + .20)
7½-yr. boys	+ .03 (r = — .03)
8½-yr. girls	+ .02
8½-yr. boys	— .06
9½-yr. girls	+ .24
9½-yr. boys	+ .59
11½-yr. girls	+ .30
11½-yr. boys	+ .39

Table IV would indicate that, while the negative correlation between carpal age and the number of permanent teeth shown in Table III for 7½-year boys may be rather exceptional, the correlations do tend to run low, so that one might expect ordinarily a correlation not much higher than somewhere along .20 or .30. And Table IV shows one additional instance of a negative correlation, that of the 8-year boys. The general indication then is that, though the correlation between carpal age and number of permanent teeth is as a rule definitely positive, it is low, and may occasionally turn out negative. Table IV would also indicate that at about the age of 8½ years the correlations are apt to be lower than at any of the other ages from 6½ years to 11½ years, inclusive.

As possibly explaining the low correlation between the teeth and the carpus it may be of interest to quote the conclusions of Bean: "There are one or more periods of acceleration alternating with periods of retardation in the development of any one of the structures of the body. The periods of acceleration in the development of one structure may be synchronous with the periods of retardation in the development of another structure." After reviewing the facts concerning the development of the extremities and of the teeth, Bean concludes as follows: "The development of the teeth and of the long bones are therefore reciprocal. The periods of acceleration in the development of the one correspond to the periods of retardation in the development of the other."[9] Boas appears to agree with this view, when, in summarizing the growth of children he writes: "The greater the retardation or acceleration in any one particular respect, the greater will be the disharmonies that develop in the body, since not all the other organs will follow the same rate of acceleration and retardation."[10]

Turning to the general purport of the data of the present study, which have now been presented somewhat in detail, what, we may ask, is the significant outcome? It seems well to attempt an answer to this question, even though we should insist that our data are too limited to settle anything with finality. We will content ourselves with the statement that the indications are that anatomical age is not so closely related to intelligence that our methods of estimating the brightness or dullness of children need be radically modified. We believe that Dr. Ward Crampton exaggerates somewhat when he postulates, that "Physiological age should be taken

[9] "The Eruption of the Teeth as a Physiological Standard for Testing Development." *Ped. Sem.*, vol. XXI, 1914, pp. 610-611.

[10] "The Growth of Children," *Science*, vol. XXXVI, 1912, p. 817.

as a basis for all record and investigation, and pedagogical, social or other treatment with children."[11] As one of the writers has elsewhere stated, physiological or anatomical age should not be substituted for chronological age. If we wish exactness, we may make a correction by adding or subtracting from the chronological age a small fraction of the deviation therefrom of the anatomical age. At the age of 10, this fraction might be as high as one-third; but the present data indicate that at lower ages the fraction should be smaller. Nor do our data permit us to follow Dr. Rotch,[12] when he goes so far as to publish a table showing the proper school grade for each anatomical stage as determined by the development of the carpal bones!

While we are inclined to take a conservative view of the practical applications of a knowledge of anatomical age along pedagogical and psychological lines, we would emphasize that the correlation coefficients we have found between anatomical age and intelligence, small as they are from the standpoint of practical usefulness, are still much greater than those we found between height and intelligence. In this connection it should perhaps be added that the correlation between height and anatomical age is not great enough to justify the hope that the former may be used in place of the latter. In the 10½-year group we found between carpal age and height a coefficient (r) of only .14 for girls and .27 for boys.

Summary

The chief points of interest shown by the data above described may be summarized as follows:

1. The changes in carpal development with age were found sufficiently pronounced to permit the formation of a scale for measuring the same, and such a scale was tentatively formulated for each sex, from the years 5½ to 11½, inclusive.

2. The variation in anatomical development of children of the same chronological age was found to be very great: the number of permanent teeth in the 7½-year group varied from one to sixteen; carpal development, expressed in terms of boys' carpal age, varied, for the 7½-year group, over a range of about 6 years, and for the 10½-year group, over a range of about 7 years.

3. In the case of both the 7½-year and 10½-year groups, the girls were found definitely more advanced anatomically

[11] "Anatomical and Physiological Age Versus Chronological Age." *Ped. Sem.*, vol. XV, 1908, p. 230.

[12] "Roentgen Ray Methods Applied to the Grading of Early Life." *American Physical Education Review*, vol. XV, 1910, p. 406.

than the boys. The 7½-year girls possessed on the average 1.4 permanent teeth more than the 7½-year boys, and, in carpal development, were as far along as boys of 8¾ years. The 10½-year girls were found to be well ahead of the 11½-year boys in carpal development, and were estimated to be as far along as 12½-year boys.

4. The superiority of girls over boys in the number of permanent teeth and in "carpal age" was shown to be paralleled by a superiority of girls at all ages in growth in height when the latter is measured in terms of the percentage of final height attained at any given age.

5. The correlation between the degree of carpal development and the number of permanent teeth was found to be very low (averaging about +.20).

6. The correlation between intelligence and either carpal development or the number of permanent teeth, while without exception definitely positive, was found to be low, the correlations obtained varying from .12 to .23 in the 7½-year group and from .30 to .41 in the 10½-year group.

7. The number of permanent teeth was found to show very nearly as much correlation with intelligence as the degree of carpal development (considering the results for both sexes).

8. The correlation between intelligence and an amalgamation of both carpal and dental development (in the 7½-year group) was found to be somewhat higher, considering the results for both sexes, than the correlation between intelligence and either carpal or dental development taken alone.

9. The correlation between height and carpal development (in the 10½-year group) was found to be very low (.14 for girls and .27 for boys).

10. A correlation between height and the intelligence quotient was obtained for the 10½-year group for each sex, and in both cases found very much lower even than that between intelligence and carpal development.

11. The relation of carpal development or of the number of permanent teeth to school grade was found to be positive, but very slight and extremely irregular.

PRACTICAL TALKS FOR PARENTS AND TEACHERS

By Mabel Craig Stillman

Preface

The following is not offered to the public as a learned treatise on the subject of sex education, but as an appeal to mothers and fathers to live intimately with their children and to prepare for the questions about life that, in an intimate and sympathetic companionship, will come from the children as naturally as light comes from the sun.

The illustrations given are taken strictly from life incidents in country, town and city. The experience of field work is often more illuminating than theory or book knowledge. The book of life is always open, which all may read who will. It has been a pleasant experience of the writer to find that mothers, unlearned in theories of education, confirm the accepted ideas about the characteristics of childhood and youth, and that more mothers are eager to be shown the way to instruct their children than we have estimated.

Young women, from school, office and factory, have given encouragement because they appreciate the plain explanation of matters vital to themselves.

Wise and good men have added inspiration and strength because they declare that men can live by the same standard of morality as women.

Life

The greatest creation in the world is a human life. The choice and power to reproduce that life is the supreme endowment of mankind.

To promote and direct life is the greatest work in the world.

The rosebud possesses a potential power of development—petal by petal—from within.

A statue of marble expresses the genius of the artist but has no vital force of growth.

The child possesses the possibilities of both rose and marble, unfolding from within and yielding to education from without.

Thus in the development of a human life for the habitation and culture of the soul, father, mother and teacher form a triangle. Human life may be aided by a knowledge of its several periods of infancy, childhood, youth and the adult

stage. We must adapt ourselves and our teaching to the various and changing characteristics of each period, and we are concerned in this study chiefly with the first three periods, Infancy, Childhood and Youth.

Babyhood and the Pre-School Age

"He came out from the shores of the Great Unknown, blind and wailing and alone into the light of day." Or as Edmund Vance Cook humorously puts it:

> "He came ungarbed, unbooted and ungloved,
> Beggared and blameless
> Naked and shameless
> And for all he can say even nameless;
> Yet all the world bows down
> To this young mendicant
> As if he wore a crown."

If this child comes as the result of a consecrated marriage, he commences with a life vantage. To be well born is the greatest of gifts from an intelligent parenthood.

The right of the future child to be well born is a primary, inherent power of parents to bestow. Herbert Spencer defines a good individual as one being fit to become a good parent. But, at present, it is the exception, rather than the rule, that careful thought is given the initiation of a child life. The attitude of mind towards the new life in many homes seems to be: "Well, here you are. We didn't want you and we can't afford you, but you belong to us. You're a pretty baby and we'll take good care of you."

The mite of humanity is then treated like a big doll with no feelings; bounced and tickled, loaded with clothes, starved or stuffed according to whether he cries or sleeps; put on exhibition before admiring friends and relatives who poke him in the ribs, kiss and toss him, chuck him under the chin and scream in his ears. Is it any wonder he has the colic? Who would not?

Spare the little one. Let him have quiet sleep, food at regular intervals, freedom from too much or too tight clothing, fresh air, and respect from the visitors.

The foundation for a healthy, normal childhood is laid in infancy, and the young woman who enters marriage without preparation for the care of the baby is responsible for much infant mortality.

Rightly observed, marriage means parenthood, and the young man and young woman should not enter into a contract

which involves the coming of children and the foundation of a family without studying the first principles of generation. Yet how many enter blindly into a contract of marriage without having given thought or preparation for the most solemn and responsible duties involved in the coming of a child.

We face the fact that in the greatest of all human events there is lamentable and disastrous ignorance which results in the most distressing consequences known to humanity.

The fault, of course, lies in the neglect of the parents of the past generation to instruct their children on the subject. Considered apart from the absurd and hypocritical affectation that ignorance on this subject is innocence, it appears as the most iniquitous of all forms of neglected education that our youths of both sexes are allowed to grow up in ignorance of the most simple and primary fact of their own beings.

The home is the first school of the child, and the opportunities, therefore, of the parents are unlimited in this question-asking period. The boy or girl is an interrogation point and will doubtless ask about the moon, the sun, the stars, the earth and how everything is made. Fortunate is the child whose questions are treated seriously and answered intelligently. Such a child will learn to ask sensible questions because he knows they are treated with respect.

The parents who grasp these golden opportunities are establishing subjects interesting to the child.

One of these subjects of interest to the average child is the origin of life.

Mothers, you must not fear that the mind of your child has been unduly awakened if, as early as five or six years of age, he asks the question, "Where did I come from?" On the contrary, you may have reason to think the mind of your child has been robbed of perfect frankness if this, or a similar question, does not come to you.

A mother related to me how she gave the first lesson to Tom, aged eight, and to Nellie, six. Tom said, "Mama, why is Tabbie cat growing so large?"

Mother reflected. It was not common in her circle for mothers to tell the truth to their children on this matter; but there had been experiences in her life which had caused a feeling of resentment that preparation for dawning womanhood had not been given her by her mother, and illness had been the result. She decided, therefore, that the present moment should be the beginning of all truth to her children.

She decided, too, that Nellie should hear the story—because she was Tom's playmate, so she answered:

"There are little kittens growing in the body of Tabbie in a soft warm nest, and that is why she is growing so large. When they can take care of themselves, there will be a way for them to come into the world."

"Is that what being born means?" asked Tom.

"Yes, that is what it means. Tabbie must be fed and given the very best of care in the world. We must give her milk to drink and treat her very kindly because she has to give food to the little kittens, just as every mother does to her babe before it is born. We will make a soft bed for Tabbie in a basket and put it in the woodshed, and maybe in a few days we will find five or six pretty kittens there."

"Oh, Mama," exclaimed Tom, "won't that be great! Were we born, too? Please tell us about us."

"Yes, I will tell you, because only mothers must talk to little sons and daughters about this. Every mother wishes to tell her own child, and you must not talk to any of your playmates about it, but come to mama when you want to ask any questions."

She drew them close to her in her room, where they had come with their eager questions, and, speaking in a low voice, she said:

"You grew in a soft warm nest right near my heart. You were there for nine months. I ate food for you and made little clothes for you and prayed for you and loved you before I ever saw you. Then, when it was time, you were born, and mama held you close in her arms and thanked God for you."

The children stood spell-bound, and then with one impulse four arms were thrown around her while Tom spoke for both.

"Now we know why we love you so, Mama."

Right then and there a halo of divine motherhood shone around her head, and the eyes of the children saw it.

Tabbie proved to be the best kind of an object lesson, and this wise mother took advantage of the opportunity and really only answered the child's questions. Animals are dear to children, and the domestic pet is so close as to seem almost human; and caring for the pet mother understandingly tends to increase the love for the human mother.

The stronger the inculcation of this sentiment in childhood, the greater will be the respect for motherhood and fatherhood in later life, with an exalted idea of home and marriage.

The mother who told me this story forged a chain of confidence between herself and children that will bind them to her; and the same wisdom that prompted her then will continue to prompt her to watch for other opportunities later on until the whole story of life is unfolded, step by step.

Another mother's experience: The saying of the Jesuits, "Give me a child until he is seven years of age and I care not who teaches him thereafter," might have been the motto of the mother who gave the following story, which I give in her own words:

"When I was a child I was told everything under the shining sun that was absolutely impossible and positively untruthful, simply from a standpoint of modesty and from the prevailing thought that a child could not understand the serious things of life. I became distrustful of what grown-ups said; but I would believe a child because a child had more of my grade of intelligence. Thus parents insult the intelligence of their children in failing to give them truth and confidence.

"When, after marriage, our babies came to us—a boy and a girl—I decided to answer their questions truthfully and to treat their desire for knowledge with respect. So, as they began to talk, I answered their baby questions about this and that as carefully as I would have those of my most honored guests, and I was rewarded by an unfailing confidence.

"During the kindergarten age the questions were asked as a result of observation. 'What makes Kitty so fat?' 'Why does the rooster fight the hens?' These questions made me realize that I must prepare to answer truthfully the questions in the child's mind.

"With the aid of books and after giving the subject much thought I became convinced that the home is the foundation of human society, and that at home the child should be prepared to take its proper place in the world. A great injustice is done by parents who fail to prepare the child to combat moral degeneracy, which, under different phases, I find the children in a large city have to encounter even in the third and fourth grades. Without the confidence gained from my children I would have been unaware of the real conditions, which may not be common in any school, but which are possible at times, whether in the city or country, in the private or the public school.

"The subject of race continuance should be an education rather than a sudden revelation, and this education may begin as early as the child begins to realize the existence of the great world in which things have their beginnings and growth.

"These lessons should be graded according to the different periods of life, beginning with reproduction in plant and animal life—leaving the human life to be revealed after the mind, trained by the previous lessons, can comprehend the magnificence of a perfect human being. This education should be completed at the beginning of the adolescent age.

"I began to enlarge the kindergarten lessons of family life as always consisting of mother, father, sister and brother. Birds, rabbits, pigeons, flowers, plants, seeds and eggs were studied with the same idea, and my boy of six and girl of five were delighted with everything alive. I taught them about the planted seeds getting their food from the earth and beginning to grow. How the chick hatches from the egg. How the little animals are born. I was careful in these lessons to make them understand that father and mother are necessary, without exciting interest as to the function required of each, expecting to teach this later when the question came. Some children ask immediately, but mine did not.

"With the education already received, it was a beautiful revelation when I told them, at seven and eight years of age, that they were going to have a little brother or sister. Henry wanted a brother, and Nellie wanted a sister. I told them from the first that many mothers did not tell their children and did not want any one else to tell them, and that some mothers wanted their children to believe the stork-and-doctor story. But every mother ought to have the privilege of telling her children as she wishes, so that they were not to talk to others about it. There were never any embarrassing remarks made before others by my children.

"This knowledge had a different effect on the boy and girl. Henry watched my steps carefully, so that I would not fall—asking few questions but always acting the gallant comrade. I remember him pushing things out of my way for fear mother would fall, and taking my arm on going upstairs.

"He heard a conversation about a premature baby dying, and I explained that perhaps the mother had fallen or worked too hard. He came home from school one day and said, 'Mother, who cleaned out the storeroom?' And when I said, 'I did,' he said, 'Mother, you should not work so hard or our baby will die.'

"On Thanksgiving, we have a habit of thanking God for our blessings during the year; and when Henry began his prayer he prayed, 'Dear Father, we thank you for our baby, and, Father, make him a strong little boy, not a sickly little boy as I was.' (The baby already existed to the children—though they had not seen, they had felt his jumps of joy.)

"One night, Henry came to me and asked if our baby might not come that night. I said, 'Perhaps, I do not know just when he will be strong enough to breathe and take his own nourishment.'

"The children both loved to help me and save me work. One day I was cross, and sister said to brother: 'Mother

doesn't feel well; that is why she is cross. She won't be cross after baby comes.'

"Nellie took great interest in the preparations for baby—sewed on buttons, fell into raptures over little scraps of lace and went over the bureau drawers every day, straightening them up, and laid out a complete first outfit, talking to him, calling him by name and giving him paddlings for imaginary naughtiness. We were all in Heaven near the date of his coming. The children went to the basket every morning to see if he had come and scolded him because he was so slow in coming. Yet no one among their playmates or in the homes where they went knew anything of these confidences.

"When no company was present we—mother, father, sister and brother—talked freely of our expected gift. I really think this did more to unite us in close sympathy than any experience of an ordinary nature could have done. To gain the confidence of my children on these intimate and vital matters was one of the most sacred privileges of my existence."

Such experiences of these two mothers are given as typical of many others I know who are in the advanced class, realizing as they do the importance of educating the little ones incidently, yet scientifically, in the truths of life because they know that the first period of childhood, or up to the age of seven, broadly speaking, is the foundation of principles of health of body and mind.

There is another truth the child should learn during this period, viz., "What is the difference between little boys and girls, Mama?"

The question will be asked of you, mothers, or it will be taught your child in a vulgar way. This is the way a friend of mine taught her children. I saw the lesson and will describe it to you.

It is time for Billy-Ned, seven months old, to go to bed. The large living room is brightly lighted, and the other children, Charles, Bert, Mary and Danny, are in the room, the older ones playing a game of cards, the younger ones playing leap-frog. Mother undresses Billy-Ned, and when his clothes are off he begins a dance of glee in his mother's lap, a dance of freedom and apparent pride. The children gather around in an admiring group, and the father comes in. He lifts Billy proudly to his shoulder.

We would like to hold the dimpled cherub, but we are too much impressed with the atmosphere of sacredness in this scene to move. He is as beautiful as the alabaster image of the Christ Child.

These lessons have been going on with each new baby,

whether a boy or girl, and at times the mother talks to the children about baby's body and its functions, not omitting the organs of reproduction but limiting these talks to the needs of the youngest.

Bathing children together or allowing a romp after being undressed will bring the same opportunities for incidental lessons. The children are not at all conscious of your intentions and think of no shame in connection with any part of the body.

I am sure teachers will agree that this is a most necessary preparation for school.

Teach your child to bathe all parts of the body, and by assuming the rôle of a teacher of physiology and being able to give accurate and interesting information about the eye, the ear, the throat, the lungs, the stomach and, finally, the genital organs, you can impress upon your child the supreme lesson of chastity—in other words, a deep respect, if not veneration, for the body. The very small child cannot comprehend the idea of its being a temple, but he can be filled with wonder and admiration for it if rightly instructed. Read Dr. Albert Moll's "Sex Life of the Child," and you will be impressed, as never before, with the importance of this fundamental training; or talk with teachers of the kindergarten and the grade schools, those who will talk freely, and you will be convinced of the need of this preventive care.

It would be a good idea to give accurate information as to how the eye and the ear are connected with the brain. Secure an illustration from some book intended for the home, more interesting than a text-book, that will show that we hear with the brain, we see with the brain, and it will then be easy to connect all functions of the body with the brain without illustrations. Finally, compare the genital organs with the eye and the ear in regard to delicacy and to the connection with the brain through the wonderful nervous system.

It is easy for the child to understand that the eye, the mouth and the nose have a delicate mucous lining that will suffer with harsh treatment, and it is only a natural step to explain that the genital organs also have the same kind of a lining and therefore must have careful treatment. Teach these principles also by the law of suggestion. Use the finest kind of soap and an extra wash cloth for the face and another just as fine for the genitals. Say, "You like to have good eyes and you will not rub the inside of them when you wash your face, neither will you handle roughly or touch this other sensitive part of your body at any time."

It may seem that I am overstressing these points, but

through my acquaintance with teachers of all grades I have found the great prevalence of masturbation in the schools.

Secret practice often begins very early. This habit is observed by the kindergarten teachers as well as by the teachers of the high school.

If the preparation for school here advised is given, together with attention to the proper foods, sleep, play and to the general wholesome surroundings, there will be no trouble of this kind in a normal child. However, it is wise to be open-eyed but quiet in watchfulness of your children. If a child is very nervous and irritable after being in bed or alone, or if he is always nervous and fretful, you may find it is due to this habit. If circumcision is needed in the boy, or a similar correction in the girl, it should have attention. But, supposing the habit of masturbation has escaped the attention of parents and is observed by a teacher, then why cannot the services of a school nurse or of a physician be called into use as well as for cases of sore throats, decayed teeth and the various ailments of childhood? I have failed to find that any provision is made, though teachers are alarmed over the cases. A woman principal of a trade school told me that she requested the superintendent to give a talk to the boys on the general subject of morality, and he said it was the place of the school doctor; the doctor said it was the place of the parents; the parents could or would not, and so we might say the child was in the center of a vicious circle.

In a city school so common was the habit among the boys, practised at their seats, that the teachers called it "the pocket habit." In another city school the superintendent ordered the pockets of the boys to be sewed up. The teachers are usually reluctant to inform the mothers because of fear of giving offense. A teacher related to me, however, an incident where, by the help of the mother, a boy of twelve was cured in a few weeks.

Quite a different result came about when another teacher, feeling the seriousness of a situation, informed one mother that a boy was trying to teach her boy; she also informed the mother of the offending boy, and both mothers were angry.

"My boy, my little Willie, would not listen to anything like that," said one mother.

"My boy would not think of anything like that," said the other mother.

The teacher might have replied, "Madam, your 'little Willie' is dead, and Bill has been born."

It may seem paradoxical, but I would not talk to the child about this or any bad habit. I would not make a picture on

the sensitive brain that may become an impulse hard to resist. It is because of the benefit of early supervision and an understanding of the child's proclivities that I have stressed so much the importance of preventive measures. The positive lessons will act like a tonic of strength and will leave the right picture on the subconscious mind of the child.

Many parents have told of talking, with good results, to the subconscious mind of the child while asleep, and it could do no harm to try the experiment. Whoever wishes to try this goes to the sleeping child and speaks the name aloud, even though it may cause the child to become half awake; then a positive treatment is given something like this: "Nellie Smith, you are free from the habit of biting your finger nails. You no longer have any desire to do this. You are entirely cured."

No good results will follow unless the person giving the mental treatment feels the assurance of the things he says to the child. Whether we speak to the child asleep or awake we should remember the law of suggestion acts with definite good or harm on the plastic mind of the child.

The Second Period of Child-Life
or
Pre-Adolescence (from 7 to 12)

The New Relation—A Teacher—According to G. Stanley Hall, the normal child of seven or eight, and not earlier, is well equipped for school. The brain has received nearly its full growth. A large part of the language has been acquired. The body is strong, if the child has lived the free life of nature and has received the care indicated in the first chapter. Now he is ready to have training in self-control and will power, to have untrained proclivities directed into channels of industry and usefulness.

It seems to me that the only excuse for an abbreviation of the pre-school life is a home unsuitable for the child. Therefore, in this discussion the school age is placed at not earlier than seven years.

There is no definite and sharply marked division in nature between the periods of early childhood and pre-adolescence or between early and late adolescence, but by a consensus of opinion we may say that early childhood continues until the age of seven or eight and pre-adolescence from seven and eight up to twelve and thirteen.

The Teacher as a Co-worker—The third great interest is being added to the child's life, and now we have the triangle of protection—mother, father and teacher.

The school life reflects the home life just as the mirror reflects the face. Almost as truly, too, does the child reflect the school and the teacher to his mother. Mollie's eyes shine with joy when she comes home and tells of what happened at school.

"We had songs and games and our teacher told us a story."

"Oh, Mama, won't you come to school with me tomorrow and see my pretty teacher?"

"Can't I take her some flowers?"

You re-live your school days as you enter into the pleasures and work, ambitions and disappointments, of each succeeding year.

The friend-teacher is a real co-worker with you because she sees the child from the viewpoint of a different relationship and in a larger circle than the home.

The principal of a school in a large city told me that a Mother's Club in his school had contributed much to discipline because there is now co-operation between mothers and teachers where before there was more or less friction.

This co-operation is not always secured even through a Parent Teacher Association. There are too many gulfs between the homes and schools, into which the child may fall.

There are many splendid mothers, however, who are helping to build bridges. One such is a college-bred woman who has three small children, too young for school. She said:

"I am getting acquainted with the teachers in the school because they will soon be a strong influence in the lives of my children." She has organized a Parent-Teacher Association that holds its meetings in the evening, and she has made it so popular that business and professional men attend.

Do all teachers make welcome the mothers who visit the schools? Or are there teachers who resent this as an interference?

There was an extreme case of a teacher in a small town who would not allow mothers to enter her schoolroom. She was not engaged, of course, a second time; and this brings me to the story of her successor, which I relate as a practical example of what can be accomplished when one has a desire to blaze new paths.

For convenience we will call her Miss C. She went to this town from a distant city to develop a plan she entertained of interesting mothers in sex education. If she had known the town she would have been afraid to try her experiment, and if the town had known her it would have considered her a freak. She exerted herself to be very friendly and cordial to the mothers—which was a pleasant contrast to her predecessor.

She had a talent for elocution, and she recited at church fairs, socials, temperance meetings and what not. She was not a woman who cared for popularity; but now it meant helping the purpose that dominated her soul, so she sought it. She arranged an attractive program for Thanksgiving that drew a good audience of mothers and a few fathers. At the close she made a speech, expressing her strong convictions that mothers and teachers should co-operate in the moral training of children and that the new idea of education called for a more direct teaching of truths usually veiled from children. She was discreet in not using the term "sex education" because she knew the word "sex" might be her undoing.

The suggestion of a parent's association was well received and the organization taken up. Two leading women were elected to important offices and a young mother to another; a committee was appointed to draw up the by-laws, and the time was set for the first meeting. Miss C. asked the School Board for money to buy books for the society and received it. Meetings were held once a month, when discussions on different phases of the mother's teaching and the single standard of morality formed part of the program.

Miss C. bought several good books on purity and sex education, which formed a nucleus for a circulating library that the club afterwards bought. A bright woman connected with the leading newspaper—the only one in town—became interested and wrote lengthy accounts of the meetings and the discussions, so the town took notice. Miss C. did not know until long after the Parent's Club was formed that this little town had the name of being "just terrible" and that no voice had been raised in public against silence and prudery or in denunciation of the double standard of morality. She was assisted by the club to arrange a meeting for "Men Only" (the first ever held in the place) where an earnest and fearless man, Professor Goodrich of Albion College, talked to a large audience.

This actual experience is related to show that a teacher who has the courage of her convictions can do a great deal in specific moral education.

The same woman afterwards carried on a widespread education among the mothers in a large city through the medium of mother's clubs. Courses of lectures were given in the school buildings for six consecutive months under the supervision of the Mothers' Congress.

This course was followed another year for seven months under the supervision of the School Board. Not a dissenting voice was heard, although an element had long existed pre-

viously that would have ousted the Superintendent of Schools had sex instruction been allowed to one boy or girl in the school.

Parents and Teachers Co-operate—One of the best suggestive examples of co-operation between parents and teachers is found in a private school in New York City—"The Ethical Culture School." There is a monthly meeting of the mothers of children, with the teacher in each grade leading in the conference.

In addition to this there are councils of all the mothers and teachers, and at the regular teachers' meetings there are representatives from the parents and from the School Board.

A paper called "School and Home" is published monthly by the association of parents and teachers.

Character building in school life is of supreme importance and calls for the greatest wisdom and the utmost co-operation between parents and teachers. Not only the moral virtues of truth, purity and honesty may be inculcated, but habits of deportment, cleanliness and order are established by mutual service or endangered by conflicting authority.

Of course we shall have to leave out of this co-operative scheme many indifferent parents and teachers, as well as the type of teacher who will not encourage mothers to visit the school.

The child presents an interesting study in the period which we are now studying. There is a dispute among students of child nature on the reasons for these characteristics.

G. Stanley Hall says: "The years from eight to twelve constitute a unique period of human life. The acute stage of teething is passing, the brain has acquired nearly its adult size and weight, health is almost at its best, activity is greater and more varied than ever before or than it ever will be again, and there is peculiar endurance, vitality, and resistance to fatigue. The child develops a life of its own outside the home circle, and its natural interests are never so independent of adult influence. Perception is very acute, and there is great tendency to immunity from exposure, danger, accident, as well as to temptation. Reason, true morality, religion, sympathy, love and esthetic enjoyment are very slightly developed."

The Boy Scout movement has taken into consideration the "gang spirit" of the boy and is converting it into useful activities. Instincts of adventure, camping, fishing, hunting and hiking are made to serve a purpose in usefulness and character. A certain gang of boys troubled a corner-grocery man by taking vegetables and destroying everything left out of doors at

night. Then a whole week elapsed with no trouble, and the man inquired of the policeman, "What has become of those rascals you had to watch around this corner?" "Well, sir, would you believe it! Some little woman has done more than we could. She's got them to come to a Social Center in the schoolhouse, and if Jim McGarvey isn't teaching the rest of them United States history. You know he was the leader of the gang."

A mother, sometimes unconsciously and peevishly, drives a boy away from home. She says, "Oh, dear, Henry is growing into such a rough, noisy boy." She tells him to go out of doors, and he finds boys who are not only noisy but vicious.

Sister Susie is quiet and ladylike. She likes to look pretty, and mother spends her time making clothes for Susie. All the many trifles a girl likes in her room are given her, and she can take her girl friends there to eat the fudge they have made in the kitchen; but it doesn't matter much how Henry's room is furnished or whether it conforms to a boy's idea of fitness or not. It must be effeminate and nice. Henry's friends make so much noise and bring in so much dirt that they cannot be permitted in the house.

A mother in Buffalo found that her boy in the first year of high school had grown tired of it and was on the point of rebelling against school altogether. She didn't nag or scold; but she talked with Percy until she discovered that he wouldn't hate school so much if he could do something with his hands, so she sought a trades school and sent him there.

She helped him fit up a room on the third floor for himself. They talked over the matter of furnishings, and he was allowed to fit it up as best suited his taste. A bright, light, natural-gas stove, banners, trophies, a good bed, a couch with pillows, a large table for books and study, all contributed to make it cheerful.

He was monarch of all he surveyed and attended to the room himself. It was tidy, too, but distinctly a boy's room. He invited his boy friends there whenever he pleased, and instead of the sullen, discontented boy he changed into a happy one, interested in his school, in his home, and became a source of delight to his mother. It was the awakened mother and the room as much as the changed school that caught and held the boy, I believe.

The Father's Part—The father might understand his boy if he would take time to go into his life and sports, but he is too busy during the day and too much interested in other matters in the evening. So the boy's savage instincts are not converted

into civilized ones, at least, in the home because boy and father too seldom meet there.

Can you guide or teach him in the primary matters of his questioning mind if he does not hold your confidence? Of what value will be experience to him of the dangers and wrongs incident to sex life if it is withheld from your son until the poison has entered his soul and his life is wrecked by bodily diseases?

The father who cannot talk from his heart as well as his head about the meaning of sex and its approaching manifestations in the son's life would better delegate the task to the mother. Most fathers do thus delegate it, perhaps for other reasons as well as the one mentioned.

Can you guide or teach him in matters of sex when he is approaching the danger age, if you have lost his confidence? Fathers, can you find time to play a game with Henry, run a race, take a walk to the woods, read a story, help him with a lesson or work in the garden or at the bench with him?

A father in LeRoy, N. Y., said to me: "There is no pleasure in the world equal to that of taking my two boys in the auto and going to the woods or fields to hunt for geological specimens and odd things which we put to use in our curio manufacture." A play and study room where the two small boys held sway was situated on the first floor near the family sitting room.

If your boy doesn't care so much for the strenuous life as other boys, but likes to read, let him be furnished with stirring stories of adventure and heroic deeds that will satisfy the desire for excitement and will inspire him to heroic action when he tries to live the life of the hero.

You cannot impart a knowledge of this to your boy unless he feels you are a real understanding friend and that you are giving him a square deal.

Bad boys are often healthy savages too much thwarted.

Most boys do not care for girls at this age; they do not care for personal appearance but want a fling of freedom.

The natural instincts of the girl at this period are very much like the boy's, though less on the surface, because she is told it is not ladylike to run, jump, climb trees, or talk loud and laugh boisterously.

The men of primitive tribes collected in groups to defend the women, and fought with physical strength while the women were removed from the scenes of combat and fought their battles with their tongues. So we do not see the gang spirit in the girls so much as in boys, but in its place, suppression, vanity, deceit and gossip, perhaps inherited from the

primitive woman whose submission to the dictates of her lord resulted in moroseness, cunning and deceit.

If we would change this tendency in the girl, let us give her freedom of thought and action. Why shouldn't a girl be free to romp, climb trees, row, swim, play ball and be a good comrade of her brothers? She will be cultivating health and a directness and candor of thought and character. Just as the little girl will naturally retire from the bedtime romp as she develops, so she will become less of a tomboy when her life touches the shore where the brook and river meet.

The opposite type of girl at eleven or twelve may be one who wants to be a regular young lady. She dresses, if she can, in the extreme of fashion, is conscious of admiration from men, invites a premature love affair to which an unprincipled man may respond.

She is the type, too, who is a menace in the school to younger boys and girls. She will often be found in the fifth or sixth grade when she should be in the seventh or eighth. Poor girl! She hasn't any real mother to teach, quiet and control her. She is the girl who is on the streets at night, at the cheap theater, at the railroad depot, in the ice-cream parlor or at the public dance.

If no wise woman—a teacher or neighbor—takes an interest in her she will sooner or later be found in the Juvenile Court. The following incident shows what can be done to prevent this misfortune.

What One Woman Did—A lovely young woman came to me after a lecture in one of the public schools and told me that she had been recently married and was going to live in the West. She expressed a desire to learn all she could about the subject of teaching children properly and took a very intelligent interest in the "moral education." I was so much impressed with her natural frank and earnest attitude that I made inquiries about her and was told that at one time this girl was one of the toughest in the school, which is situated in a rough part of the city. But a teacher mothered the girl, took her home with her and kept her over night, because she saw the possibilities in the girl. I do not know the teacher, but she probably does not boast of any greatness; yet what could be more Christ-like?

Strange and unbelievable as it may seem, if the teacher in that city had collected a number of girls who needed the help which she gave this wandering one and had talked to them in school as she did to the girl in her home, it would have cost her her position as a teacher.

When and how will the insanity of such management be cured?

Natural History as an Aid—Boys and girls in the second period, or between eight and twelve, love activity and are easily trained in habits of obedience and industry. Mechanical activities, such as drawing and physical training, dancing, acting, spelling and reading, are easily mastered. Many boys and girls take a vital interest in gardening when they are given responsibilities and an interest in the proceeds.

The commercial interest makes its appeal. Spiritual development is gained when children are taught the family life of the blossom (mother), pistil (father), pollen (children) (seed) and learn to watch the changing phases of the roots, the bud, the blossom and the seed.

This is sex education combined with useful work and should be the first lesson. Plants, flowers and window boxes can be used as substitutes in the winter or where a garden is not possible.

The children will be interested in getting caterpillars and feeding them, and watching the development into cocoons and then into butterflies. Hens' eggs, frogs' eggs, crawfish eggs, turtle eggs, are studied in their natural environment and from the standpoint of education in reproduction as well as in a tenderness and a care for the mother and for the young. The lesson of the difference between the fertilized and the unfertilized egg will be another important one in the part the father plays in nature. The observation of nature in the country is by no means sufficient; neither is any undirected observation. Nature study means an insight into the secrets of nature and of the wonderful plan running through all life.

The beauty of reproduction must be given by the wise parent or companion and should be taught in connection with the life habits of animals. In this way it takes its proper rather than a too important place.

The study, observation and care of domestic fowls afford the opportunities for industry and a certain amount of useful knowledge such as the selection of a good mother and a good father, the development of the chick within the egg and the strong mother-love, attributes of the hen; but there are no opportunities to teach family life, because whatever was monogamous in the male has been bred out of him for commercial purposes. The students of breeding have decided that one male is sufficient for a certain number of females, so far as the fertilization of the eggs is concerned, and for this reason one only is allowed for economical reasons.

The birds are the most beautiful examples of family life; and when the children attract birds to the trees and shrubs, build bird houses, set water in basins, scatter crumbs in the

winter—in other words, show the children that love means care and protection, and you will be rewarded with the opportunities for pointing out examples of courtship, marriage, building the home, and rearing and caring for the young. The father presents the best kind of a lesson in animal life in devotion and faithfulness to family life. This study of the home and family qualities is enhanced and made more interesting through increasing study of birds in the schools and parks.

Following these lessons, if the teaching is done systematically, will come the care and study of a mammal—a cat, a dog or a rabbit. The rabbit is a better animal, if one is to choose, because the pair can be chosen for good qualities and the matter of selection made prominent as well as a purposeful and a planned parenthood. This is better than wandering, quarreling and howling male cats that are not very romantic or exemplary fathers. Perhaps nothing would be more helpful, right at this point, than to give you, in her own words, an account of how a lesson on the mammal was given in the third grade of the Kalamazoo Normal training school by Miss Bessie Goodrich.

Pet Animals as Subjects for Study—"In our school we have thought it worth while for each grade to keep and care for some pet during the winter months, and last year the third grade adopted a female rabbit. As time went on, the children expressed a wish for some little ones. Together we discussed what must be done, and I left the discussion largely in their own hands because I wanted to discover whether I had to meet any perverted thought. There was none except in the case of one or two of the older boys, where I imagined I saw a suggestion of the wrong attitude. They watched me closely; but when they found that I encouraged the open discussion, they entered into it with a good spirit. It was decided in the most simple fashion that there could be no family of babies without a father, so the male rabbit was brought in. One of the boys had raised rabbits at home, and he instructed us in the proper care of the mother while she was carrying her little ones. Indeed, this little boy, who was most fortunate in his parents, was our instructor all through this period. When questions arose he explained in the most naïve fashion. During the weeks before the birth, the most tender care was taken of the prospective mother. The Friday before Easter we left school knowing the little ones would soon come. The following Monday, when we returned, there were seven babies. It is needless to say that joy was unbounded.

"You ask, would we repeat it? Most assuredly we will. And were there any objections from outside? None, whatever.

Among the principal things learned in these lessons were—the necessity for the male parent, the chief difference between bird and mammal eggs, the reasons why the latter must incubate the eggs within the body, and the care which mammals give the young.

"Besides, and one of the most important points, it gave the right color to the knowledge—a color which will not easily fade from the children's minds.

"Such nature study gives the child something he craves with his whole being, something he is bound to get, too soon or later, generally sooner, for better or worse, usually for worse. If nature study could be taught in this related fashion, instead of in a scrappy, half-hearted way, I think the children would be kept from many a secret session of forbidden talk, led, perhaps, by wrongly informed companions."

The average age, I should say, of children in the third grade is not more than eight or nine years, so with the accomplishment of these things at that age we can easily see how all that is necessary for a youth to know about the human can be learned before the pre-adolescent age of twelve.

There are no definite boundaries, we know, between childhood and youth, and the girl usually shows signs of puberty before the boy, sometimes two years earlier; but the boy's observation and reflections are usually ahead of the girl, so he is ready for instruction as young as the girl. Boys of a scientific, analytical turn of mind demand of the mother much explanation which she would like to postpone.

She has the privilege in this, however, of following where the child leads, and she can broaden and glorify the secrets of reproduction in the very soul of the child.

There come, too, unexpected events that will demand explanation of some phase of life. As an example, a mother asks: "What should I have said when my daughter of eleven came from school and exclaimed, 'Mama, they are talking about —— at school, and they say she has a little baby and that a boy is its papa. Why, Mama, they are not married. It isn't true, is it?' " I asked the mother if she had talked with her daughter at all about parentage, and she replied that she had not; so this was my advice. I would say: "Mary, it may be true, and I will explain more about it after we have had some little talks together. Let me talk with you every night when you go to bed until you understand. I will do this if you promise not to listen to or talk with any one of the girls at school." Many mothers have requested help in similar perplexities. It is an evidence of the mistaken idea that we can keep children "innocent" or, in other words, ignorant of life.

No opportunity occurred in the cases described to present the beautiful interpretation before an abnormal and deplorable vision of life was thrust upon the child.

Children are also seeing problem plays in the moving-picture plays, which arouse a pre-mature interest in love and passion, beyond their judgment to interpret.

It is not for these reasons alone that the education concerning the meaning of sex in human life should be nearly completed in this stage, but for a more important reason—Mother Nature is gradually preparing youth for manhood and womanhood, and on its threshold stand the boy and girl eager for a knowledge which later they will not welcome.

The present stage (or at twelve or thirteen), therefore, is a most opportune time to give as much concerning the meaning of adolescence or of sex in human life as you think necessary for the healthy condition of mind and body after the actual changes have come.

The Young Girl's Problems—Until about this time much of the information has been given incidentally and perhaps in response to questions, but it may now be necessary to thrust certain specific information upon your child. For instance, unless circumstances have arisen to bring the subject of menstruation to the notice of your daughter, you will be obliged to explain it to her in detail; and this will bring to her an added meaning of parenthood.

It will help you to possess a vocabulary of scientific words and a knowledge of the physiology and anatomy of reproduction, so that you can express yourself confidently. This may be obtained from one of the many books written by physicians.

It is deplorable that many mothers neglect to prepare their daughters for the great event in their lives. A mother told me that because of her mistake her daughter came home from school in great agitation and gave way to hysterics that lasted for hours. She shut herself in her room and would not be reconciled. The shock caused a nervous trouble that kept her out of school for two years. A mature woman related to me that she stopped her first menstruation with ice water and had brain fever within twenty-four hours. A careful mother told me that when she gave the specific information to her girl it caused her to weep, but when the change came she was ready and it had no apparent effect on her emotions.

Neglected Boys—There is much negligence of a girl's education at this time, we know, but the boy's preparation for the change that will come to him is still more neglected.

The father's time has come to tell his boy, in the same

careful but plain way that the mother has used in telling to her daughter the facts about menstruation, that a change is coming for which he must be prepared. The education due the boy is of far greater importance than is usually realized.

It is to be hoped, however, that the number of fathers are few who are so barbaric as to express themselves in the way that has been described by several mothers: "What can I do? My husband and his mother tell me that when our boy is about fifteen he will have to find a girl or woman for a mistress."

A mother described to me her joy in hearing from a lecturer on sex hygiene that a man could live as pure a life as a woman. She said: "I knew my older boy was not living a good life, and I knew he contracted a venereal disease; but I thought the double standard must exist, but after that lecture my eyes were opened. I have literature, and I am talking with the younger boy. He has heard lectures at the Y. M. C. A., and now I know he is living a chaste life."

Many parents may object to the theory that a boy of twelve or thirteen should have a knowledge of what sex will really mean to him, but in support of the idea I advocate let me quote from M. J. Exner, M. D.

In his report of the results of a questionnaire conducted among 948 college men he says that "63.9 per cent received their first striking impressions of sex before the eleventh year and 87.6 per cent received them before the thirteenth year, that is, before the beginning of puberty. The average age at which the first permanent impressions were received was 9.6 years."

He continues: "The tremendous import of these facts challenges serious attention. We know that it is a law of the mind that first impressions tend to be the most lasting. They are the most difficult to eradicate. It is also to be borne in mind that the sex instinct exerts a more profound influence upon human life than any other instinct and that it is more easily misdirected. The sex instinct furnishes the greatest undercurrents of life, especially during that life-shaping, character-determining period—adolescence. It gives character and direction to life more than any other human instinct.

"It is, therefore, of the utmost importance that the earliest sex impressions shall be of a wholesome nature and proceed from responsible sources."

Is not this sufficient evidence to convert the doubting to a conviction that, in this triangle of mother, father, teacher, one or all three should gain a scientific knowledge to impart to the boy the information necessary to save him from contamination of mind and body?

Is there not evidence, as well, to support the idea that this safeguarding must be given before the adolescent age?

I submit an outline of instruction in sex education which gives only a few hints of the more or less graded work that parents can prepare to do. An outline is bare and blunt, but coming as it does at the end of a discussion of the two periods—pre-school and pre-adolescent ages—in which much has been said about the indirect teaching, that is, about an understanding of child nature as a pre-requisite of sex teaching, it will serve as a ready-to-hand summary for reference.

INSTRUCTION

The instruction supplies certain subject matter and definite methods for parents to use in giving it to the children.

We might say the parents must know something of biology, physiology, anatomy and much of psychology, but in more simple language we might say they must know certain facts about the human body and how the Creator performs the miracle of creation. They must know what the contents of the child's mind will likely be at different ages, so that they will know how to adapt the truth to the child in a way which will be not only a real lesson in the beauty of all things created but will be character building of the highest kind.

---

1. (a) The appearance of seeds, easily observed, such as peach, horse-chestnut, hazelnut, apple, orange, peas, beans and corn.

The hard cover protects life within: is, therefore, a house, or nest.

(b) An open hazelnut shows a dwarfed, black seed. Why? The answer will be developed in a study of the blossom.

(c) The Easter lily. The blossom is a house and family. That is: mother (pistil), father (stamens) and children (seeds) are within. The touch of the pollen grain with something in the seed creates life. The quality of life depends upon the mother and father. Eugenics.

Something was wrong in the blossom that produced the bad hazelnut.

(d) Perfect flower on the apple tree produces perfect apple, in connection with the proper nourishment.

---

1. (a) Commune with nature and the child. Madam Montessori says, "The child becomes spiritual through nature." Let the child plant peas, beans and corn in a glass with moss and blotting paper and watch them grow.

(b) Take children on nature study expeditions.

(c) Read to the child and tell stories that will influence conduct.

2. Lessons concerning respect for the body by means of the bath.

(a) Talks by the mother as she bathes the child about the eye, and ear, the nose, the mouth, the chest, the hands, the feet and the reproductive organs. No part is evil; all should be clean and sweet but not touched for anything but cleanliness, and for the call of nature. The body is a beautiful house.

(b) Instructions to the mother as to why a physician should examine the lower orifices of the body to ascertain if there are abnormalities or if the boy or girl needs circumcision.

(c) The difference in sex learned by the child as young as possible,

i. e., bathing a boy and girl together, by means of a baby or by a romp just before going to bed.

4. Kind treatment for the child who masturbates. Mother will help fight the battle if there is one after the hygiene and circumcision are attended to, and the mind informed.

5. Plenty of out of door exercise for the child up to eight years. According to Stanley Hall, the child should not go to school until eight. Premature control of nerve centers weakens will power in the later period. The trunk, arms, legs should have much exercise. Madam Montessori would train the child's senses through self-directed activity. She says a child is not trained when it is made to be as still as a paralytic or as mute as a stone.

From the Age of Seven to Ten

I. From the seen to the unseen.
   (a) Protoplasm in the hen's egg.
   (b) Cell life { wall / body / nucleus
II. Reproduction asexually.
   (a) Amoeba.
   (b) Molds.
   (c) Slipper Animal.
III. Spyrogyra (union of two cells).
IV. Reproduction sexually.
1. Fucus.
   (a) Antheridium.
   (b) Oögonium.
2. Hydra.
   (a) Sperm cell.
   (b) Egg cell or ovum.
3. Easter lily.
4. Apple blossom.
5. Seeds.
   (a) Apple seeds.
   (b) Peach pits.
   (c) Hazelnuts.
   (d) Corn.
   (e) Beans.
   (f) Peas.

Insects.

6. (a) Grasshopper.
   (b) Butterfly.
   (c) Bee.
7. Angleworm.
8. Fish.
9. Fowl (dawn of parental love).
10. Bird life.
   (a) Habits.
   (b) Courtship.
   (c) Home life.
   (d) Care of offspring.

Application

1. (a) Connect the "Story of Life" in the lower forms of plant life with the higher.

(b) Connect the higher forms of plant life with the insect.
(c) Connect the insect life with the frog and fish.
(d) Connect the life of the frog and fish with the fowl and bird.

2. The attention of the child is gained by concrete objects.
(a) Use the flowers, plants and seeds easily obtained.
(b) Get caterpillars and put on a bush with mosquito netting inclosing them.
(c) Watch the caterpillar eat and grow into a chrysalis.
(d) Place chrysalis in a warm room and watch for the butterfly.
(Notice that the male butterfly dies after giving up sperm cells.)
(e) Get frog eggs from a pond in April, put them in water and watch them develop into tadpoles.
(f) Mark some hens' eggs and watch them develop. Take the one marked 2 out the second day, the one marked 5, the fifth day, etc.
(Explain the fertilization of the nucleus of the egg.)

3. Recreational activities.
(a) Working with tools.
(b) Caring for a garden.
(c) Rearing and caring for pets increases gratitude towards parents.
(d) Housework and doing errands.
(e) Habits of industry developed into interest for home.
(f) (Story of Mrs. W.)
(g) Games and picnics at home.

4. The child from seven to ten is easily controlled.
(a) Willing to be taught.
(b) Delights in drill and mechanical duties. Music, gymnastics and drill part of arithmetic.

5. Boys, untrained, are like primitive men.
(a) Delight in roaming and out of door life.
(b) Would like to live in caves or tents.
(c) Gang spirit begins to be manifest.
(d) Has no pride in personal appearance.
(e) Doesn't like girls, teases his sisters and fights with boys.

6. Literature for this age should be strong, stirring stories of heroic adventure. (Examples.)

7. Girls show less marked characteristics than boys.
The girl is fond of out of door life. If natural, she likes some of the same activities as the boy.
Doesn't care much for dress.
Likes to play with girls and boys in any kind of weather.
The overtrained girl prefers to whisper secrets to another girl, sometimes manifests the traits of primitive women in the love of secrecy and sometimes in cunning and deceit.
The free open life is better than too much repression.
The girls and boys at this age should play together in the homes or in the grounds. This will modify the roughness of the boys and bring out frankness and candor of the girls, especially if the group belong to families where the information about sex life has been given and the children feel free to go to the parents with questions. Gardens, chickens or pet animals will give an outlet for energy and will be a splendid opportunity to observe sex life under the direction of mother and father.

From the Age of Ten to Twelve

I. Mammal.
1. Rabbits.
2. Kittens.
3. Puppies.

4. Lambs.
5. Calves.
6. Colts.

II. Difference between other animals and mammals.
1. Egg is smaller and more precious.
2. It is fertilized and developed within the body of the mother.
3. The mother gives the offspring nourishment from her body.
4. The offspring has long infancy.
5. The mother requires love and care.
6. Mother and father may be chosen for parenthood.
7. Laws of procreation may be observed when fine offspring are desired.

III. Characteristics of mammals.
1. Nest for eggs is in the ovaries of mother before they are fertilized.
2. Nest for egg after it is fertilized is uterus.
3. The spermatozoa of the father joining with the egg in the mother make the embryo.
4. Spermatozoa must be healthy. Nest for the spermatozoa is called scrotum or testes.
5. Unfertilized eggs pass out of the passage from uterus at regular intervals.
6. The eggs do not leave the ovaries when the embryo is growing in the uterus of the mother.
7. Different kinds of mammals.
8. Different homes of mammals.
9. Different names of male and female.

Buy a pair of rabbits and choose for good parenthood. (Kalamazoo teacher.) Father is an interested companion and hero in the eyes of the children. He tells stories, sleeps in a tent with the boys, goes hiking, works at the bench, and plays games of chance, enlists the services of the children in the work of the home. Mothers and fathers visit and visit and visit with the children.

The wise parent can easily weave into the last lesson the specific discussion in the pages just preceding this outline.

The information will be more welcome to the boy and girl of twelve and thirteen or older if made impersonal.

The remaining lessons may seem formidable and too much to teach to children of twelve and fourteen. It is too much to be taught in a short period, but we are considering that it is only the culmination of twelve years of teaching and that much has been given all the way.

The color always must be remembered. Not knowledge alone will give wisdom.

Adolescence, or the New Birth, from the Age of Twelve to Fourteen. Mental Change. A New World Opens

1. Begins to reason on new lines.
   Mystery of life?
   Who am I?
   Who is God?
   What is everything?
2. Mutual attraction between boy and girl.
3. Much regard for personal appearance.
4. Self-willed, egotistical, important.
5. Voracious readers—girls, romance; boys, adventure.

6. Fond of the romance in drama and moving pictures.
7. Form new and sometimes peculiar friendships.
8. Parents often slighted.
9. Serious love affairs.
10. Peculiar taste in eating.
11. Often despondent and ill-tempered.
12. Gay and reckless and restless.

This Age Needs Wise Guidance

Parents must relax discipline, and govern by invisible leading strings.

1. Permit the young people to be grown up.
2. Let them assert themselves.
3. Sympathize with every new or peculiar turn of their minds.
4. Do not mollycoddle.
5. They are becoming individuals.
6. Treat their opinions with respect.
7. Provide opportunities for harmless amusements where boys and girls can mingle.
8. Give them ideals to contemplate.
9. Encourage great ambitions.
10. Provide healthful activities—wholesome and pleasant for the girls; strenuous and exhausting for the boys.
11. Mother often influences boy more than the girl.
12. Father influences girl more than boy.

Physical changes herald the approaching adolescence.

1. Rapid increase in height (often 1 inch per month).
2. Widening of shoulders and hips.
3. Increased blood supply and pressure.
4. Change in features.
5. Hair becomes lustrous and thick.
6. Girls develop grace, roundness and beauty.
7. Boys develop awkwardness, leanness, whiskers and a deep voice.

The cause is the changeless one of nature.

The power of reproduction is developing within the testes of the boy, and the same power is developing within the ovaries of the girl.

These changes come two years earlier to the girl than to the boy.

---

1. Review.
2. The "Story of Life" now reaches the highest form, or Human Life.
3. Comparison of framework of orang-outang and human.
   (a) Skeletons similar excepting heads.
   (b) The mouth of orang-outang projects and the forehead recedes.
   (c) The mouth of the human recedes and the forehead projects.
4. Brain of man is the commander.
   (a) Anatomy.
   (b) Function.
5. Nervous system.
   (a) Cerebrospinal.
   (b) Sympathetic.
   (c) Vaso-motor.
6. Anatomy of body.
   (a) Essentials of the framework.
      1. Spine.
      2. Ribs.
      3. Pelvis.
      4. Hip bones.

7. Situation of the vital organs.
8. Physiology.
   (a) Function of the lungs.
   (b) Function of the diaphragm.
   (c) Function of the digestive tract.
   (d) Function of the skin.
9. The function of the pelvic organs in woman.
   (a) Uterus.
   (b) Ovaries.
   (c) Fallopian tubes.
   (d) Vagina.
   (e) Vulva.
10. Function of the pelvic organs in man.
   (a) Scrotum.
   (b) Penis.
   (c) Vas deferens tubes.
   (d) Seminal vesicles.
   (e) Prostate gland.
   (f) Cowper's gland.
   (g) Urethra.
11. The internal secretions and their effect in puberty.
   (a) From the ovaries.
   (b) From the testes.
12. Menstruation in woman—signs of approach.
13. Periodicity in man—manifestation.
14. Health of mind and body.
   (a) Air and sunshine.
   (b) Cultivation of the diaphragm.
   (c) Food.
   (d) Relaxation.
   (e) The law of suggestion.

POST-ADOLESCENCE—FROM THE AGE OF FOURTEEN TO TWENTY-ONE

I. Development from girlhood into womanhood.
1. The meaning of true womanhood:
(a) Perfect health of mind and body.
(b) The ability to know herself.
(c) A knowledge of the physical functions of reproduction in both male and female.
(d) Knowledge of woman's influence over man's weakness, and a conscience in the use of it.
(e) Knowledge of the social diseases.
(f) Knowledge of the higher laws of procreation and of eugenics.
(g) Habits of industry and usefulness.
(h) Knowledge of home-keeping and child care.
(i) Activity in the home of humanity or the world.

II. Development of boyhood into manhood.
1. The meaning of true manhood.
(a) Perfect health of mind and body.
(b) Training in self-control.
   1. Through normal health.
   2. Through temperance.
   3. Through ideals.
   4. Through chivalry.
   5. Through physical training.
(c) Scientific knowledge of reproduction in both male and female.

(d) High ideals of brotherhood and fatherhood.
(e) A knowledge of the social diseases.
(f) Ability to deny the "Physical Necessity Lie."
(g) Knowledge of the laws of procreation and eugenics.
(g) Habits of industry and business.
(i) Altruistic activities.
(j) Courage, honesty, truthfulness, purity.

However, through the teaching of these lessons or of others substituted by initiative and through circumstances occurring in daily life, one must remember the job is never completed.

A mother once said to me, "I told my boys one day under the shade tree."

I suppose she told them some important facts, but just as she has to prepare food daily for the ever recurring appetite, so will she have to give them counsel, companionship and supervision to meet their ever recurring appetite for knowledge not learned from books. It is no task, but a God-given privilege.

Finale

Is it too much to expect that the child, protected, guided and instructed within the loving triangle of mother, father and teacher, will grow into the full stature of a human being—a being who will give out to humanity Love, Power, Joy, Inspiration, Health and Wisdom? And finally that there shall appear upon the earth the superman?

"The rise of man is endless
Be in hope
All the stars are gathered in his horoscope.
The brute man of the planet he will pass
Blown out like forms of vapor on the glass
And from this quaking pulp of life
Will rise the superman
Child of the upper skies
Immortal he will break the ancient bars,
Laugh, and hold out his hands among the stars."

CHILD LABOR AND CHILD NATURE

By Raymond G. Fuller
Associate Director, National Child Labor Committee

Vital to the solution of the child-labor problem is an increased popular appreciation of childhood itself; and this presupposes, of course, a better understanding of childhood. In spite of parental love for children, in spite of the claim on the part of society to have a special place in its heart for children, children even today are visited with vast cruelty and abuse—not so much a conscious cruelty and abuse, not so much a brutal cruelty and abuse, as a cruelty and abuse of adult ignorance and thoughtlessness and neglect. So many fathers and mothers know so little about children that one sometimes wonders whether they are entitled to be the fathers and mothers of children; and society, upon which also devolves the task of fostering and bringing up each succeeding generation, is not better informed or more intelligent, and a doubt similar to that concerning parents arises concerning society.

Two sources of encouragement may be noted: the first is the comparative recentness of real humanitarian regard for children, together with the results of this regard; and the second is the rapid spread of the facts discovered through scientific study of child nature in both its physical and its psychical aspects.

Beyond Economics

There are those who believe that child labor is solely an economic phenomenon, and its solution therefore an economic solution; that if we could do away with economic greed and economic pressure, we should thereby do away with child labor. They are only partly right. That is to say, child labor may flourish and indeed does flourish in the midst of plenty. It is not a matter alone of power to provide children with the things they need, but is also a matter of knowing what they need and of willingness, nay, eagerness to provide it at all costs. It is not so much a matter of economic income as it is of spiritual outgo. Unless the needs of children are understood and highly regarded, these children may receive stones instead of bread, even where prosperity is boasted.

A writer on the rural child-labor problem recently said:

"Give the farmer his just due economically and he will take care of the child-labor problem on the farm. With economic justice, he will furnish his boys and girls with every advantage." It is difficult to believe that children in the country are going to be provided with every advantage just as soon as a few dollars have been added to the farm income. The parents must know what is advantageous; they must know the meaning and value of play, the meaning and value of schooling, and the meaning and value of children's work as distinguished from child labor. We cannot wait for the economic prosperity of the country before beginning the campaign for the development among the rural population of appreciation and demand for the things that children really should have, and the things that children really should have we cannot adequately measure in terms of their future adulthood.

We often, in dealing with child labor, condemn conditions which we regard as injurious to the child's future efficiency; but the real question should be, not what kind of adulthood he is being prepared for, but what kind of childhood is he having now? There is needed a new reverence for childhood. There is called for such a reverence as shall regard growth as its own end and childhood as its own glory, without measuring everything by adult ideas or in terms of the future adulthood of boys and girls; such a reverence as shall guarantee to every child his right to have a childhood, and to enjoy it fully, and to be fully efficient in his proper capacity of being a child. The principal new value in the field of child welfare is the new value attaching to childhood as a good-in-itself.

Child-Labor Psychology

Though it is true, undoubtedly, that we need in child-labor reform a social vision, a social conception of the child-labor evil and of the objective in child-labor reform—in a word, a humanitarianism broader than the old humanitarianism of pity and tears for the individual exploited child—it is equally true that our central and dominant interest should be in the child, the child as child. He is our proper point of departure in child-labor reform. The elder economists used to talk about the economic man, as if he were a separate and distinct being from other men; but that viewpoint has been discarded. There is no economic man, merely as such. There is likewise no child laborer, merely as such. There is, instead, a child. We may consider the child in connection with child labor; we may consider child labor in connection with the

child; but in either case we need to know what the child is, by nature.

Modern child psychology has taught us that in neither body nor mind is the child a miniature adult. Children are not "little men" or "little women," however much we may foolishly wish them to be, or however hard we may criminally try to make them such. Quite as truly, "little men" and "little women" are not children.

Out of the nature of children arise their needs; and out of children's needs, children's rights. As the primary and principal right of children is the right to childhood, so it is also the right to a full childhood and a normal childhood, which really amount to the same thing. What constitutes a normal childhood, and what are the environmental conditions of a normal childhood? This is the most important question in the entire field of child welfare. The answer will not be attempted here, beyond the pointing out that a normal childhood is one of natural development in accordance with developmental needs, that development of body or of mind depends on previous development, and that between physical and psychical development there is close correlation and more or less interdependence. Any occupation that interferes with a full childhood, a childhood of normal and complete development, a characteristic childhood in each of its stages, is far from being a gainful occupation.

Childhood is peculiarly and pre-eminently the motor period of life. The child's great need is activity. His nature demands it. His growth and his health, both physical and psychical, depend upon it. Without it the establishment of proper and necessary co-ordinations in the neuro-muscular system and of that constitutional unity which the ancients described in the phrase, "A sound mind in a sound body," is impossible.

What Is Play?

The characteristic mode of childhood activity is play activity, which is sometimes interpreted as a sort of resurgence, in the individual, of the racial past. It is true that play activity tends strongly to take those forms that involve the larger muscles, the simpler co-ordinations and "brain tracts that are old, well-worn, and pervious"—tendencies and powers that are racially inherited from the hoariest of hoary antiquity—but while the elements of play come from the past, the secret of play is found in the present. The secret of play is found, not in racial history, but in individual development. Yet this is hardly a fair statement, for the

secret of play is itself a racial inheritance. There seems to be an inborn tendency to exercise the physical and psychical powers that are ready to be exercised and to satisfy the interests that are related to these powers. Thus play may be properly regarded as the joyous exercise of the powers and capacities, muscular and mental. It is sometimes said that play is self-expression, but perhaps it might better be said that self-expression is play.

Growth is the secret of play, and play is the secret of growth. The man who has never played at all is non-existent. He could not have grown up if he had never played. He could never have learned to know his feet from his hands, or learned to walk. For play begins with progressive triumph in the use of physical powers—powers of manipulation, of movement and co-ordination. The baby gurgles with joy as he plays with his toes, then exults in his new-found ability to creep about on the floor, then in learning to balance himself on his feet, and stand and walk. Essentially play is self-discovery and the trying out of powers—the joyous doing of what one is able to do, the exercise of ripening capacities, an exploration in the realms of muscle and mind. It is growth and development and progress.

The motions and motives, the acts and thoughts of play, are the products as well as the causes of growth. The individual in ceasing to grow ceases to play, and he who ceases to play ceases to grow. The compulsions of play are the compulsions of growth, both physical and mental; inner compulsions, not external, and therefore allied to spontaneity and freedom. Happy is the child who plays, and happy is the man who has "found his work," or, as we sometimes say, who has "found himself in his work," for in his work he has found a play satisfaction, due to its suitability to his powers and capacities, and the opportunity it affords for self-expression and self-expansion.

Play and interest are one and inseparable as body and soul, and there is no growth, no learning, without interest and the satisfaction of interest. Needs give interest, but the needs of the child are not the needs of the adult; the former are the needs of growth, while many of the latter are governed by extrinsic factors—the necessity of making a living, of doing business, of paying taxes. The adult has powers for the needs of adult life; the child has powers only for the needs of childhood, except as tremendous and devastating strain is put upon his physical and nervous system. Force upon children activities physically or mentally beyond their needs or beyond their powers, work in which they can take

no interest, work which evokes no spontaneity or enthusiasm and brings no satisfaction, and you have done that which inevitably will retard or pervert their development, and prevent their all-round development, and which will seriously impair the normal functioning of the vital processes within the body and very likely sow the seeds of nervous disorder.

Let us see what the modern scientist has to say on this subject. The following is quoted from Herbert S. Jennings, professor of biology in Johns Hopkins University: "There is one method of the exercise of the powers that is almost free from these dangers, and that is what we call play. For years, play was looked upon merely as a sort of inevitable waste of time among children, but scientific study of the cultivation of these organisms has shown that play is in most respects the best, the ideal form of the exercise of the powers. Particularly is this true for the younger children, but it is in large measure true as they grow older. Play is the activity which their own natures suggest and guide; it is varied as their diverse budding capabilities require; and when free it is not carried beyond the point where one activity interferes with the development of others."

Not all work is child labor. Give a child work suited to his powers and appealing to his interests, give him work in which he can express himself, in which the instincts of initiation, creativeness and ownership are involved, in which he can use his imagination and serve purposes of his own, work that he can do with enthusiasm and satisfaction, and you have given him developmental and educative work—children's work, not child labor. This is the kind of work that he does when he joins one of the agricultural clubs now gaining a foothold in rural America. Give him also play, for much as there is in common between play and children's work, they are not the same; there is something playful in play that is not in any work. But do not give him child labor, for the results are exactly those that Professor Jennings mentions as produced by conditions in badly conducted schools: "By continued repression of many of the powers, and by forcing activity in powers not yet ready, strain is brought about; spontaneity is done away with; interest in work is destroyed; the instinct of workmanship is rooted out, hate for work cultivated in place of it." He speaks of malnutrition and nervous disturbance as among the evil consequences of such repression and forcement—consequences in no wise associated with play, except through the fact that play, and especially vigorous outdoor play, is the best of all preventive agencies and a therapeutic agency of no little value. No child labor, an increasing

amount of children's work, and always an abundance of play and recreation, is the right of every child in his progress toward maturity.

One of the chief indictments against child labor is that it deprives children of opportunity to play. We do not, however, without considerable knowledge of child nature, appreciate fully what this indictment means. To rob children of childhood as playtime is to rob them of childhood itself, for as Wood says: "Children love play as all young beings love life, because life is play. The child's life is one of physical, mental and moral development. Development means self-expression, self-expression means activity, and activity means play. Children do not play deliberately from ulterior motives; with them it is play for play's sake; play is life, they live to play; they are children because they play."

It has been said that the child who has not played has missed half of life. Rather he has missed childhood, which is more than half of life, since, in Froebel's words, "The whole later life of man, even to the moment when he shall leave it again, has its source in this period of childhood." It is no exaggeration to say, as Waddle does, that the child must play or he cannot become a man; for play is functionally related to growth and development of body and mind and the integration of personality. It is the secret of all progress in the individual and the race. Norsworthy and Whitley write: "A child who does not play not only misses much of the joy of childhood, but he can never be a fully developed adult. He will lack in many of the qualities most worth while because many of the avenues of growth were unused and neglected during the most plastic period of his life."

Childhood is properly playtime, not worktime. By no means is a workless childhood implied, but the work of children should be children's work in amount and kind, and not child labor. Nor is a playless adulthood implied either as a fact or as a desideratum. Grown-ups play and ought to play. In a recent psychological essay, Professor Patrick so defines play as to include practically all the activities of children and a large share of those of adults, such, for instance, as baseball, football, tennis, golf, polo, billiards and countless other games and sports; diversions such as traveling, hunting, fishing, yachting, motoring, flying, dancing, vacation outings, games, races, spectacles, fairs, amusements and expositions; the theater, opera, moving pictures, lectures and entertainments; the enjoyment of music, painting, poetry and other arts; the daily paper, the magazine, the short story and the novel. A difference is sometimes noted between the play of

children and the recreation of adults; but adults do play in response to purely and distinctly playful impulses, and children in school or at work have need and desire for that recreation which is diversional, relaxational, re-creative.

Psychology of School-Leaving

By neglect and abuse of child nature in the schools, we not only drive children into child labor but deprive them of the full educational advantages they ought to be receiving while they remain. The facts as to retardation and school-leaving are a severe indictment of the schools and of ourselves, and to a large extent are due to our failure in education to follow the lead of the child himself. Not yet has educational practice caught up with educational psychology.

"Nature has not adapted the young animal to the narrow desk, the crowded curriculum, the silent absorption of complicated facts," says John Dewey. "His very life and growth depend upon motion, yet the school forces him into a cramped position for hours at a time, so that the teacher may be sure he is listening or studying books. Short periods of exercise are allowed as a bribe to keep him quiet the rest of the time, but these relaxations do not compensate for the efforts which he must make. The child is eager to move both mentally and physically. Just as the physical growth must progress together with the mental so it is in the separate acts of a child. His bodily movements and his mental awakening are mutually dependent." These requirements of nature, well worth considering in connection with schooling, are well worth considering also in connection with child labor.

Activity in childhood, under natural conditions, becomes increasingly constructive—if the constructive, creative impulses are thwarted, the child's activity becomes less satisfying as well as less profitable. Activity, moreover, becomes increasingly social, and the work of the school is usually carried on with little of social spirit and co-operative method. Interest in vocations increases, and the schools in general fail to recognize and utilize it. These that do establish vocational training and guidance greatly reduce their school-leaving mortality. This vocational interest, at first, is not so much interest in vocations as vocations as it is the manifestation of an unsatisfied craving for the concrete and practical. The sense of practicality in the effort a child makes does not depend on the adult notion of its utility; he does easiest and best what in his present stage of development and outlook has definitely useful meaning; he learns easiest and best

what seems to him applicable, and really remembers only what he applies.

One reason why children leave school is retardation, which may be the result of mental or physical defect (and this itself may have been induced by conditions of school life) or the result of a misfit between methods of teaching and the learning process. We are apt to forget that learning takes place chiefly through dealing with real situations. In human evolution, mind is the creature of crises; in the life of the individual, learning and thinking obey a similar law of mental development. We cram and stuff the child's mind with adult nutriment and wonder why he fails in avidity. Children are natural-born learners, built to learn, eager to learn—and we give the best marks, not for learning, but for reciting from books and performing memory stunts, which is a totally different thing. Learning proceeds in a large part through the operation of the instinct of curiosity. Curiosity is the basis of a large share of the intellectual development in animals and in man. Froebel called it "the bud of mind." It is to the intellect, as Kirkpatrick aptly says, what appetite is to the body. It is a cause of growth and development. "All men are curious," says Pillsbury; "from this develops love of knowledge; from that, in turn, respect for knowledge." But the child's curiosity is repressed in school, and that is another of the reasons why school displeases him. It irks him that the school leaves out and even discountenances one of his favorite and principal methods of acquiring knowledge.

Among the many causes of school-leaving is the fact that education, as ordinarily conducted, seeks to get the same results out of all children, not only neglecting, but even trying to smooth out, individual differences. Says W. H. Burnham, "A false pedagogy has exalted the value of an all-round symmetrical training and of the advantage of doing what children are not well fitted to do, and in which they are bound to fail." He quotes a report from the late Professor Dolbear:

"In antediluvian times, while the animal kingdom was being differentiated into swimmers, climbers, runners, and fliers, there was a school for the development of the animals. The theory of the school was that the best animals should be able to do one thing as well as another. If an animal had short legs and good wings, attention should be devoted to running, so as to even up the qualities as far as possible. So the duck was kept waddling instead of swimming. The pelican was kept wagging his short wings in an attempt to fly. The eagle was made to run and allowed to fly only for recreation.

All this in the name of education. Nature was not to be trusted, for individuals should be symmetrically developed and similar, for their own welfare as well as for the welfare of the community. The animals that would not submit to such training, but persisted in developing the best gifts they had, were dishonored and humiliated in many and various ways. They were stigmatized as being narrow-minded and specialists, and special difficulties were placed in their way when they attempted to ignore the theory of education recognised in the school. No one was allowed to graduate from the school unless he could climb, swim, run and fly at certain prescribed rates; so it happened that the time wasted by the duck in the attempt to run had so hindered him from swimming that his swimming muscles had atrophied and so he was hardly able to swim at all; and in addition he had been scolded, punished, and ill-treated in many ways so as to make life a burden. He left school humiliated and the ornithorhynchus could beat him both running and swimming. Indeed, the latter was awarded a prize in two departments. The eagle could make no headway in climbing to the top of a tree, and although he showed he could get there just the same, the performance was counted a demerit, since it had not been done in the prescribed way. An abnormal eel with large pectoral fins proved he could run, swim, climb trees, and fly a little. He was made valedictorian."

Professor Burnham's comment on this story is as follows: "From this prehistoric attempt at ideal education down to the present, many schools have put a premium upon failure. And from this continued effort to do work that cannot be done well, pupils are apt to acquire a slovenly attitude and like the young horse given too heavy a load at first, they acquire the habit of lying down under a difficult task. What can be more depressing than continuous failure in whatever one undertakes? As our classes are now arranged and school work ordered, it often happens that month after month many children have no legitimate opportunity to succeed. If a chance to leave school offers, naturally they take it." Frederick Burk protests against the lock-step schooling now in vogue, and adds: "There are no misfit children. There are misfit schools, misfit texts and studies, misfit dogmas and traditions of pedants and pedantry. There are misfit homes, misfit occupations and diversions. In fact there are all kinds and conditions of misfit clothing for children, but—in the nature of things there can be no misfit children."

Against conditions in school that cramp and stifle and starve and baffle, children consciously or unconsciously

rebel—and go into child labor, jump from the frying pan into the fire. The child-labor problem, it cannot be too often repeated, is as much a problem of premature school-leaving as it is of premature going-to-work.

Mental Hygiene

Though in school there is much violation of the nature of children, both in positive and in negative ways, it is still more common in child labor and is one of the explanations of the fact that working children do not stay in their jobs. At any given time only one-half of the child laborers under 16 years of age are actually at work. The child laborer is the father of the shifting worker—the last to be hired and the first to be fired. And hysteria, we are told, is pre-eminently a disease of the unemployed or the aimlessly employed.

All the most characteristic strains of modern civilization fall upon the nervous system, which, as Dr. Gulick points out, is the latest system of the body, biologically and genetically, to reach its full complexity of development—and the part most easily shattered. "We have begun to recognize," he says, "the importance of muscles in the normal growth of personality. The nervous system and the muscular system are so vitally inter-related in the carrying on of all life's central activities, that to educate the former without making provision for the latter is fool's economy." In child labor there is no provision for either. But the inter-relation of body and mind in normal development goes farther than we commonly recognize. Says Dr. Jellife: "*Mens sana in corpore sano*,—a healthy mind in a healthy body,—has been the watchword of past civilizations. It is time to modify this and to recognize that this is but one half of a truth, which in order to be realized needs to be stated in a larger form which embraces this. *Corpus sanum in mente sana*,—a healthy body can only exist as its behavior is influenced and controlled by a healthy mind."

Much is involved in child labor that is quite unfavorable to mental as well as to physical health. The general popular conception of child labor is one that is still limited very largely to the physical and physiological aspects of the evil. Not only does it fail to place due emphasis on the indirect effects of child labor—the deprivation of play and of schooling—but it fails, as regards direct effects, to emphasize sufficiently the psychical side of the child-labor experience. The abolition of child labor and the establishment of its substitutes, particularly suitable schooling, suitable play and suitable work, is a task of mental hygiene.

The nervous disorders and derangements in which child labor may be a contributing factor are of great variety. They range all the way from slight abnormalities to functional disease in which the power of sight, or the use of arms or legs, has been lost. Of special significance from our present standpoint are the so-called "neuroses of development," commonly described under such heads as chorea, dementia praecox, hysteria, psychasthenia. Chorea is a disease of childhood; and dementia praecox, of youth; and the roots of most functional disorders of adulthood have been traced back into the earlier years. It is asserted that five per cent of our school children are neurotics in the sense that they are more than ordinarily predisposed to the formation of mental "complexes" unfavorable to the healthy and co-ordinated functioning of intellect, emotion and will. Most child laborers are in that particular period—early adolescence—when neurotic disturbances are peculiarly liable to appear and become seated. Too little consideration is given to the tragedy and cost of preventable nervous disease. It is said that the growth of insanity in this country is outstripping that of population. The lesser mental ills, we are told on good authority, are increasing with even greater rapidity. The time of prevention is childhood, but we are doing to children what we should not do—making them men and women too soon. The mental hygienist as well as the modern educator knows that nature would have children be children before they are men and women.

Nature, instead of telling the child to grow and develop and instructing him in ways and means, endowed him with the play impulse. Play, as spontaneous, self-expressive activity, is always according to nature. It conforms at every moment of the child's life to the genetics of his growth and development. On the positive side, it reflects the neuro-muscular co-ordinations established at the time and establishes those that are ready to be formed. It reflects also the various instinctive tendencies (or many of them) as they ripen—and helps to ripen and strengthen them. In short, it obeys the self-finding and self-developing push within the child. On the negative side, it respects the limitations of the child as regards those neuro-muscular co-ordinations and psychic motives. In true play no movement is made or action performed ahead of its natural and normal time—there is no unreadiness of body or of mind for that movement or that action. Thus it fosters no prematurities or precocities of physical or psychical or psycho-physical development. Its activities, being timely not only, but interesting, since interest and

play are integrally related, are without that defective psychic motivation so common to child labor and so favorable to cumulative fatigue, which in turn is favorable to the inception of those dread diseases of personality, the neuroses and psychoses.

Child labor, in many of its forms, constitutes a repressive environment. It is no respecter of the instinctive needs, developmental demands, and natural interests and desires common to all normal children. It is no respecter of individuals and of their differences in interests, aptitudes and abilities. It is often the case that free bodily movement is denied and that proper periods of relaxation are not given. Labor-saving devices in the factory have rendered work more sedentary, depriving the large, basal muscles of their due proportion of exercise and at the same time making an excessive demand for the fine and exact movements of the small, accessory muscles, with an accompaniment of severe nervous effort and strain. What is true of adult workers as industry has become more and more specialized is true of the children in their even more mechanical occupations—personal initiative, personal responsibility and personal interest in results have less and less opportunity to function. Constructiveness, self-assertiveness, sociality, playfulness—these instincts and desires are thwarted and balked in child labor, and on the farm as well as in the factory. For these and other reasons, much of the work of the child laborer is done with defective motivation. Sometimes it is motivated by fear. We find in child labor an involuntary servitude of children to purposes not their own and really beyond their powers—a servitude in what to them is a foreign land—a doing of things which they cannot do. Lacking, of course, is that natural spontaneity and enthusiasm of childhood and youth upon which the symmetry of psychic life and growth depends.

Defectively motivated work—work that is done with psychic fiction—probably leads directly to nervous disturbance and disorder, as well as indirectly through the fatigue it occasions. It produces emotional effects of some kind. It upsets the emotional equilibrium to some extent. Something happens in consequence of the repressed instincts, thwarted interests and balked desires of the child laborer. Surely this is true: if the child cannot do what he wants to do, what he is instinctively impelled to do, he can think—he can wish and dream in terms of his normal impulsions. But his thought-life is denied the test of actual application. A cleavage comes between thinking and doing. Queer complexes are built up, manifesting themselves in queer behavior. John B.

Watson puts the matter thus: "Activity is the natural setting and very nature of all mental growth. As has been said, 'The laws of mental health and of character require the completion of thought or feeling by expression in action.' Thus feeling and thought and fancy which are not brought to the test of action, to their fulfilment in action, tend to become one of the danger points of human nature."

The psychical side of the child-labor evil might be stated partly in terms of suggestibility. Children are more suggestible than adults. Fatigue enhances suggestibility. In child labor we have a combination of the two factors. Suggestibility and fatigue may become psychopathic, with consequences many and serious. Conditions which involve fatigue and particularly the cumulation of fatigue, which lower the general physical tone, which separate the child from his own natural society, which destroy self-confidence and initiative, which starve the instinct of workmanship instead of feeding it, which present an experience of repeated failure, which are marked by such concomitants as worry and fear, or which fail to develop a rich fund of wholesome, objective interests, are conditions found in child labor and in the etiology of nervous diseases and personality disturbances of various sorts. Sanifying and prophylactic are interesting, fruitful work, well suited to the individual's powers, and plenty of play. Here we come again upon the distinction between child labor and children's work, another name for suitable work, and upon the deprivation of play as one of the worst features of the child-labor evil. It is incontrovertible that there would be less mental ill health and deficiency among adults today if there had been in past years less child labor and more childhood play.

The enormous child-labor overturn has its own significance from the standpoint of mental hygiene. In considerable part it is doubtless due to the adolescent restlessness—this changing from job to job—but other factors operate. The instincts, interests and desires thwarted, it may have been, in school, such as those of initiative, constructiveness, curiosity, are likely to be thwarted again to child labor. There is disappointment and disillusion, with usually no counsel to mitigate the shock or help the child to adjust himself to the new conditions; no aid is given toward the achievement of a normal outlook on life and work. The child tries one job after another, vainly seeking satisfaction or self-expression. There is intermittent work and idleness. Under conditions such as these, of course, little is gained in the way of vocational training or of helpful discipline. Indeed, the result is quite otherwise in

very many cases. Habits of vacillation, of change and of failure are formed, leaving their marks in weakened will and character. Repeated failure in this period affects the mental health seriously and permanently, and with the child of neurotic constitution it is highly dangerous to mind and personality. Professor Burnham writes: "From continued success through many years an attitude of confidence is developed. On this largely morale depends, and to many cases it is an essential condition of normal development and mental health. Continued failure, on the other hand, is liable to develop an unsocial attitude, the shut-in personality, and to plant the seeds perhaps of mental disorder."

Not cities, nor city streets, nor factories are the true homes of childhood, but rather the fields and forests, the rivers among the hills and the shores of the sea. The city is a false environment for children, even the confining walls of the schoolhouse, but how much more so is the factory with its manifold noises, its monotonies of noise, its rhythms false to nature. Other sounds and truer harmonies—the notes of birds, the sighing of winds through the pines, the murmur and babble of brooks—these are a fitter environment, which, alas, we can now provide for many children only in abbreviated and vicarious ways. As of sounds, so of sights: views of the mighty ocean and of broad plains; sunrise and sunset; a bed of wild flowers; the colors of nature herself. As Hall, Curtis, Gulick, Patrick and others have been telling us in their discussion of play, the natural activities and proper environment of children go back to the activities and environment of primitive man—to simple, elemental things. So far as possible, we must enable children to lead the simple life and the life of play; we must mitigate for them, to the best of our ability, the stress and strain of urban life. But even in the country places, in the great original out-of-doors, children are growing up under conditions not in keeping with the needs and demands of their own natures.

Child Labor vs. Children's Work

Nothing could be farther from the truth than the rather widespread notion that child-labor reform is predicated on the assumption that children should have no work whatever to do. It must be said, however, that the belief that children should have work is responsible for a good deal of child labor. Though much has been done by society to abolish child labor, little has been done to establish children's work on a proper basis. Society has made no serious constructive attack on

the children's work problem, but sooner or later we must come to grips with this problem. The school has not done its part toward answering the true work needs of children; neither has the home, and the urban home is under a heavy handicap in this regard. Instead of enough children's work we have had too much child labor. As part of the solution of the child-labor problem, as a means to the abolition of child labor and the breaking down of opposition to reform, we must give attention to the work that children should have and see that they have it. To establish children's work is quite as important as to establish children's play or to abolish child labor. These are all aspects of a single problem.

Let us consider for a moment some of the supposed values of child labor. In defence of it we have heard the assertion that it furnishes training in the sense of responsibility and in the habit of thrift, and that it affords the discipline of self-subordination to unpleasant tasks. However, there is abundant opportunity for developing the sense of responsibility in the home and the school through household duties, home-projects under school auspices, schemes of self-government and so on. The same is true of thriftiness. Moreover, thrift is not merely a matter of money, and the virtues connected with it may be developed in relation to school supplies, home possessions, food and clothes. Child laborers have not yet been shown to be especially thrifty with their earnings. As to the disciplinary value of child labor, modern psychology teaches that the only discipline that is worth while is that which accords with the child's own nature, his instincts and desires—not all of them of course, but a selected few. It is not the discipline that runs counter to his nature, resulting in nothing more than sullen obedience or strained submission. This latter kind weakens or breaks what we sometimes, rather inaccurately, call the will. The activity that develops the will is willing activity. Work performed in accordance with the child's own purposes and desires has far more disciplinary value than drudgery, which stifles initiative, individuality and expressiveness, all of which may be enlisted in the service of character-building and without which there is no character.

The assertion, which is not infrequent, that doing away with child labor would do away with experiences that develop vigor of personality and strength of character, that it would make children's lives too soft and easy, might be answered by a question, Why child labor for some children and not for others? Parents seldom want their own children to be child laborers. This is never the wish of educated and well-to-do parents. Child-labor reform does not seek the removal of obstacles and

difficulties from the lives of children, but only obstacles to development and achievement. There is nothing prejudicial or weakening to character in suitable schooling, suitable play or suitable work, the three principal substitutes alike for child labor and child idleness; these on the contrary challenge and exercise and discipline all the growing powers of the child, leading to self-development, self-control, self-discovery, self-confidence and the fulness of selfhood.

Psychologically, the fundamental characteristic of child labor is unmotivated activity—or activity motivated from without rather than from within. Some forms of activity involved even in school work may be described as child labor. They are beyond the child's needs; that is to say, beyond his powers, except as they are externally motivated or artificially forced. They may run directly counter to his needs; for instance, his need of free bodily movement or his need of interesting occupation. Child labor in the schools is one of the chief causes of child labor in industry and agriculture and on the streets. Child labor out of school is often entered upon as a means of escape from child labor in school. Schooling must be somehow reconciled both with what goes on inside the child and with what goes on outside the school if it is not to be child labor.

The criteria of children's work are numerous. We shall mention only five: (1) Children's work leaves plenty of time for schooling and for play. (2) It is performed in suitable places. (3) Children's work is of a kind that not only is not injurious but is positively favorable to physical and to mental development and health. (4) It is educational in the sense that has to do with one's accumulating fund of knowledge (as well as with the educative process and mental power). (5) Children's work is supervised work. The supervision may be slight, but it is there, and it is always in the interest of the child himself.

In distinguishing between child labor and children's work, very definite psychological facts and principals are available for guidance and aid. This from John Dewey is suggestive: "To confine the growing child to the same kind of muscular activity is harmful both physically and mentally; to keep on growing, he must have work that exercises his whole body, which presents new problems, which teaches him new things, and thus develops his powers of reasoning and judgment. Any manual labor ceases to be educative the moment it becomes thoroughly familiar and automatic." Child labor is child labor partly because it is not educative in this psychological sense. It does not give the child experience in

solving problems and coming off well from situations; it does not, in other words, develop intelligence.

To illustrate further the educative possibilities of work in contrast with conditions characteristic of child labor, let us take the situation of the children of tenant farmers as Charles E. Gibbons found it in Tennessee. "The kinds of work the children are called upon to do in the one-crop sections is not training them to be any better farmers than their parents. It is mere drudgery and wholly uneducational. It does not teach them thrift and economy, for the parents as a rule get all the returns from their labor; in fact their labor is simply a 'board and keep' proposition. Out of 112 tenant parents in Tennessee only 18 reported their children owning anything, such as a pig, calf, acre of corn, cotton, etc., and receiving the profits therefrom. There is nothing in this drudgery that centers interest in the farm." Farm work is not drudgery to children if it be work in which an intelligent interest has been developed through agricultural clubs or through schools related to rural life; but it is drudgery and it is child labor when it is meaningless labor or forced labor or in any way excessive.

Uninteresting work is fatiguing work. "A man with no interest is rapidly fatigued," said Galton; and so is a boy. A boy can do more work with less fatigue and injury if it possesses that element of interest which is characteristic of children's work. Work in which the movements themselves rather than the thing to be done require attention, in which the action springs from the mind of another or from external compulsion rather than spontaneously and purposively from the mind of the doer, causes a large nervous expenditure for a small muscular result and tends towards excessive fatigue. O'Shea remarks: "Observe a boy at play and at work. The play may really be harder, in the sense that more gross energy may be expended and more difficult movements are performed, but yet he is really less fatigued over the heavier than the lighter task." The difference is one of interest, and it is interest that levels the distinctions between play and the work that is not drudgery. Interest is fundamental not only to play and to children's work, but to the learning process, regard for which is one of the criteria of children's work. Woodworth says that a trade or profession "cannot be learned without getting interested in it directly and on its own account."

Dewey shows the relative value of the school and of work in a store in furthering the educative process: "The grocer's boy knows what a peck is because he has used it to measure

things with, but since his stock of knowledge is not increased as he goes on measuring out peck after peck, the point is soon reached where intellectual discovery ends and mere performance of a task takes its place. This is the point where the school can see that the pupil's intellectual growth continues; while the activity of the mere worker who is doing the thing for its immediate practical use becomes mechanical. The school says the pupil has had enough of this particular experience; he knows how to do this thing when he needs to and he has understood the principles or facts which it illustrates; it is time he moved on to other experiences which will teach him other values and facts. When the pupil has learned how to follow a receipt, how to handle foodstuffs, and use the stove, he does not go on repeating the same elementary steps; he begins to extend his work to take in the larger aspects of cooking. The educative value of the cooking lessons continues because he is now studying questions of food values, menus, the cost of food, and the chemistry of foodstuffs, and cooking. The kitchen becomes a laboratory for the study of a fundamental factor in human life."

Almost nobody believes in child labor, and almost everybody believes in children's work. Mere recognition of the fact that a difference between the two exists—and that is by no means universal among parents and citizens—is not, however, the whole end of the difficulty. It must be understood wherein they differ—how they differ. As the data of scientific research accumulate, we must in course of time set up for the guidance of parents, schoolmen and administrators of the law clearer standards of what constitutes children's work as distinguished from child labor. We are setting up standards of physical fitness for children entering industry and are thinking a little about setting up standards of mental fitness. We are measuring children with reference to their fitness to go to work, but we ought also to measure work with reference to its fitness for children. We ought to know very precisely what kinds of work are especially suitable to boys and girls in their various stages of development. This, to an extent, vocational guidance is attempting to do; but, important as it is to distinguish between suitable and unsuitable jobs, this is not quite the same thing as to distinguish between suitable and unsuitable work. The latter distinction will serve in making the former, but it has to do with the child's work needs rather than his vocational needs. The work needs are psychological rather than sociological. What they are exactly and how they are best and most fully to be met are questions calling for knowledge far beyond that represented

in the child psychology and the educational practice of the present day.

That children have work impulses and needs as well as play impulses and needs, and that they should have the experience and discipline of suitable work activities, is not to be gainsaid. The public school has a responsibility not only for the formal schooling of children and for the enrichment of their play life, but also for the enrichment and partial guidance of their work life. They should educate not only through work, but for work; and not only for adult work, but for children's work. The schools are beginning to recognize their proper relation to work activities outside the school. Some of them are allowing credit for milking the cow, caring for the horse, splitting kindling-wood, sweeping and dusting the house and caring for the baby. But merely to give credit for the performance of home tasks and duties is not enough. Children should be helped in school to a more efficient and intelligent usefulness in the home. Meriam, writing of the relation of the school to home life, says: "Boys and girls waste a great deal of time at home because they do not know what to do . . . . Every boy should have some sort of shop at home, which may be equipped very meagerly at first; it will be better equipped when its value is discovered. The girl does not call for a special space called a shop; the whole house is hers. Knowledge, direction, and encouragement to make things useful or artistic, or both, are needed; there is scarcely a home which does not need this constructive work on the part of the children. To instruct children in handwork, not as a school exercise, but as an occupation that should have a large place in the home, is the opportunity and the obligation of the schools."

It is greatly to be regretted that vocational training and part-time schools are so often recommended and urged with too little thought of their developmental value—their effect on the child. Our vocational education suffers from the pressure and domination of the industrial institution; and the industrial institution does not exist for the satisfaction of children's needs. Says Helen Marot: "The institution of industry rather than institution of education, dominates thought in industrial education courses. It is the institution of industry as it has affected the life of every man, woman and child, which has inhibited educational thought in conjunction with schemes for industrial schools. No established system of education or none proposed is more circumscribed by institutionalized thought than the vocational and industrial school movement." The vocational education of today is almost as far from meeting the needs of children as children

as the older traditional education. Just as the latter has overemphasized subjects to the neglect of child nature, so the former is now overemphasizing vocations. In both the traditional and the vocational curriculum, the content of the whole is divided, subdivided and parceled out according to what is believed to be the child's ability at his age—that is, the starting point is the subject or the vocation itself, not the child. Growth, however, is the really important consideration. The vocational curriculum has the advantage in that it involves more action—especially action of body and mind together—and that it also makes the appeal of the concrete and practical.

In considering the true work needs of children, we have to consider the child, not industry or production, and not the economic condition of parents; and the responsibility of the schools in regard to children's work will not and cannot be met by any method which fails to emphasize first and all the time the growth, development and education of the child himself.

CHILD LABOR AND MENTAL AGE

By Raymond G. Fuller

The distribution of degrees of intelligence among the general population, as indicated by the army tests, has been the subject of considerable discussion. It appears that, excluding the lowest grades of feeble-mindedness, ten per cent of the population is of "very inferior" intelligence; fifteen per cent, of "inferior" intelligence; twenty per cent, "low average"; twenty-five per cent, "average"; sixteen and a half per cent, "high average"; nine per cent, "superior"; and four and a half per cent, "very superior." Or, otherwise stated, ten per cent is limited to a mental age of not over ten; twenty-five per cent, of not over eleven; forty-five per cent, of not over twelve; and seventy per cent, of not over thirteen or fourteen. On the assumption that the age-grade progress of school children corresponds with their intelligence, it has been concluded that seventy per cent of our boys and girls are incapable of acquiring a high school education; twenty-five per cent, of going beyond the fifth grade; and ten per cent, of finishing the fourth. It has been pointed out that, according to the figures of the federal Bureau of Education, thirteen per cent of our school children actually do drop out in the fourth grade or earlier and that sixty-nine per cent do not complete the eighth grade.

Before accepting it as true that early school-leaving is wholly or chiefly due to deficient intelligence and that continuance in school is dependent on the grade of intelligence, it might be well to measure the mentality of groups of children who have left school—working children, in particular—and compare the results with results obtained by examination of children who have stayed in school. There is some reason for believing that a large proportion of working children are of rather high degrees of intelligence and that success in school is not entirely dependent on sheer intelligence. Binet says that "memory is a great simulator of intelligence," and we might add that with the methods in vogue in our present schools it is in many cases a pretty good substitute. We should keep in mind the fact that intelligence tests do not by any means measure the whole of ability and do not discover special aptitudes and abilities. Great ability may

go with small intelligence; such traits as initiative, originality, loyalty, determination, persistence and pluck represent ability.

In saying this we are on debatable ground, but instances in support of the statement could be cited. It is not a denial of the existence of a close correlation between "intelligence" and "moral qualities," though conclusive proof of such a correlation has not yet been adduced. A correlation, however, does not necessarily mean that the "moral qualities" are incapable of being trained and developed beyond "intelligence." Taking "morality" in the ordinary meaning of the term, we have reason to believe that it flourishes among the intellectually humble of the population. We have long been accustomed, in public affairs, to place a good deal of reliance on the morality as well as the good judgment of "the common people." It is the common man, we should find it hard to deny, who is most strongly bound by the folkways and mores, by custom, tradition and public opinion. But rather startling is the fact that Dr. Herman Adler, who recently gave the army mental tests to all the inmates of all the penal institutions of Illinois, found that the distribution of intelligence for this group is the same as that for the general population. This may mean simply that the tests do not measure morality at all, or it may mean that the correlation of morality with intelligence is negligible.

Taking the conclusions drawn from the army mental tests at anywhere near their face value, surely we must regard them as having a very direct bearing on the question of a sixteen-year-old standard for leaving school and going to work. It is a psychological question as well as a physiological one. Why keep children in school if they are incapable of profiting by staying there? But maybe they could profit if we had different schools from those we have today. It has been suggested that the data on intelligence levels point to the necessity of picking out the children of the higher grades of intelligence and seeing that they are enabled to go on. The idea is that social and political salvation depends on a trained aristocracy of intelligence and that the schools belong to that aristocracy. The incapables may be charitably taken care of through special classes or may be allowed to depart at an early age. But, after all, do the schools belong to that aristocracy—to the few who are favored mentally, any more than to the few whose parents are favored with money? Do the high schools belong to the small minority who are able to complete the course? Would it not be just as wise to adapt the school system primarily to the needs of the

eighty-five per cent who are now supposedly incapable of profiting by staying in school until they are sixteen? And provide the special classes for the highly intelligent? Would it not be just as wise to emphasize the educational needs of the group of "high average," "average" and "low average" intelligence (sixty per cent of the population) as the needs of the "superior" and "very superior" group (thirteen and a half per cent)?

It is of course impossible to raise the mental age or level of intelligence by education, but it is possible, without doing that, to increase individual efficiency and social fitness by suitable methods. In the new schools for the masses, manual activity should have a large place. Individuals of low and average intelligence have instincts and, therefore, are capable of forming habits; so habit formation should be one of the principal tasks of these new schools. Imitation and memory are other resources to be drawn upon for educational purposes. Allowing or forcing children to memorize lessons, instead of requiring the exercise of intelligence that develops intelligence, is to be condemned; but, on the other hand, memory training can be neglected to the detriment of the child. Though it is true that nothing can be added to native retentiveness, few capacities are susceptible to greater improvement than memory. Binet's remark that "memory is a great simulator of intelligence" should not lead us into an attitude of scorn, but should suggest that memory, because of its close resemblance to intelligence as evidenced by performance and behavior, is entitled to some respect. The fact that in the construction of the army group tests it was attempted to make them "as completely independent of schooling and educational advantages as possible" leads us to suspect that there are in performance and behavior other elements of ability than sheer intelligence as measured by such tests, and that these elements are in some way related to "schooling and educational advantages."

It should be noted that, in the opinion of prominent educators, children whose continuance in our present schools is due to persuasion profit by remaining there. "It is well known," declares Professor E. C. Hayes of the University of Illinois, "that of those who leave school without completing the first four grades, great numbers do so for other reasons than the lack of natural mental ability. And while the results of personal observation must be regarded with caution, we may say with justification that observation of the public schools renders the statement that seventy per cent of the population are incapable of acquiring a high school education

nothing short of preposterous." It is certainly doubtful if a large or a small attendance in the upper grades of school in some cities corresponds with the level of juvenile intelligence in those cities. In other words, cities probably do not vary in the degree of juvenile intelligence so much as they do in their records for school attendance in the upper grades.

However, intelligence levels as determined by mental tests carefully administered and interpreted have a very direct meaning for the problem of retardation in school work and early school-leaving, and accordingly for the child-labor problem. Lewis M. Terman, discussing mental age as a basis for school grading, says: "The significance of mental age for the teacher lies in the fact that it can be used as a basis for grading the pupils so as to secure class groups of homogeneous ability. The pupils of given grades, or even the pupils of one grade in a single classroom, are far from equal in general intelligence or in ability to master the school work. Generally speaking, not far from a fourth of the pupils in any given grade have a mental level too low to make satisfactory work in that grade possible, while another fourth have reached a mental level which would enable them to succeed in a higher grade." Elsewhere the same author writes: "While we cannot hold all children to the same standard of school progress, we can at least prevent the kind of retardation which involves failure and the repetition of a school grade. It is well enough recognized that children do not enter with very much zest upon school work in which they have once failed. Failure crushes self-confidence and destroys the spirit of work. It is a sad fact that a large proportion of children in the schools are acquiring the habit of failure. The remedy, of course, is to measure out the work for each child in proportion to his mental ability." This will help prevent the premature school-leaving which constitutes one of the main points of the child-labor problem.

Sub-normal children—those of the moron type or lower—present a special problem from the child-labor standpoint. Several states provide for the issuance of working papers to children below the regularly prescribed age if they fall in groups variously described in the statutes as "backward and sub-normal," "mentally deficient or sub-standard," "mentally retarded and unable to make further advancement in school." This exemption is not without its serious dangers. First, there is the serious danger of a loose interpretation of the descriptive terms; then there is the further danger of an inaccurate determination of the child's real mental status. The exemption should be always safeguarded by provision for

reliable diagnosis and for training, placement and supervision. There are excellent reasons for not keeping dull or defective children in school in the same classes with normal children, but none for turning them loose into industry without the protection and guidance which they, above all others, need. Special classes and schools are the commonly accepted solution, but Connecticut is to try out a novel and promising plan of vocational probation. This is to operate primarily through the Juvenile Court and probation officers, but involves for its successful working out the close co-operation of court and school officials and employers. Any valid dealing with subnormal children from the standpoint of child labor or from any other standpoint demands from the public generally just what is demanded in the case of normal children—a new and better understanding of their needs and possibilities. And the possibilities of useful and happy living, even for those children who must always remain children, are, through wise and devoted training, greater than we commonly suppose. (We are speaking here not of development, but of adjustment.)

William McDougall, in the title of a recent book, raises the question, "Is America Safe for Democracy?" The question, in his opinion—and he does not limit his discussion to any particular country—is whether the people, biologically speaking, possess the mental and moral qualities, the inborn capacity adequate to the tasks and responsibilities of an increasingly complex and increasingly democratic civilization. McDougall doubts that improved and extended education can sufficiently prepare the rising generations for their tasks and responsibilities, since the efficacy of education (or the educability of the individual) is strictly limited by innate capacity; and innate capacity, as indicated strikingly by the army mental tests, is not very great among the majority of people. "Education," of course, he uses in the broadest sense. McDougall reaches the eugenic answer. Conklin is perhaps more optimistic about education, but makes a similar suggestion. The future is to be guarded against decline and disaster, "not merely by improving the conditions of individual life and development and education, but much more by improving the ideals of society and by breeding a better race of men who will 'mould things nearer to the heart's desire.' " But this problem of breeding a better race of men presents difficulties. For compulsory eugenics—even as applied negatively to the very lowest class of mental and moral deficients—is not easy of accomplishment in a democratic society. There remains voluntary eugenics. But this depends on "the eugenic conscience"—and how else can the eugenic

conscience be developed except through education? If the mental and moral qualities of the American people (or of any other people) are inadequate, even with education, to the maintenance of the level of the civilization of which we are the present bearers, they are certainly inadequate, without education, to the adoption and carrying-out of the measures, either compulsory or voluntary, necessary for the solution of the problem of breeding that better race of men which is said to be needed.

The same thing, in general, is true not only of eugenics but of any other proposal for the salvation of civilization and democracy by effecting a readjustment between human capacity and the heavy demands made upon it today in the solution of personal and public problems. The complexity of social and economic life may be too much for us, and may be increasing in complexity while our capacity remains static; if so, there is a problem of simplifying social and economic life that requires the exercise of such capacity as we do possess, augmented and strengthened by an education intensive as well as extensive. By an intensive education we do not mean anything resembling the practice of "cramming" for examinations. We mean, for one thing, the cultivation of tastes and satisfactions other than those which dominate our present activities; for if we are to reform our quantitative civilization we must reform our qualitative selves. We need in our modern age a new paganism. This is a matter not of reversion but of conversion—and of education. We need more of that paganism that Wordsworth wrote about:

"The World is too much with us; late and soon,
Getting and spending, we lay waste our powers;
Little we see in Nature that is ours;
We have given our hearts away, a sordid boon!

"This Sea that bares her bosom to the moon,
The Winds that will be howling at all hours
And are up-gather'd now like sleeping flowers,
For this, for every thing, we are out of tune;

"It moves us not.—Great God! I'd rather be
A pagan suckled in a creed outworn,—
So might I, standing on this pleasant lea,

"Have glimpes that would make me less forlorn;
Have sight of Proteus rising from the sea;
Or hear old Triton blow his wreathéd horn."

We need, besides this Wordsworthian paganism, a religion of service. The world in which we live and move and have our being is the product of creative idealism—the spirit of man made manifest. To have within us new aims of action and effort, new conceptions of success and objects of attainment, is to create a new world without. The having of these aims is a goal of self-realization, and self-realization is the central problem of what we have called intensive education. Says Patrick: "Possibly there is a higher kind of self-realization than that found through self-expression. Self-realization may indeed be the highest goal of human endeavor, but the self to be realized may be the larger self of our collective being, including succeeding generations." In this light self-realization is one and the same thing with the religion of service.

There is a field for intensive education in developing not only new attitudes and ideals, but in sharpening and perfecting the mental tools with which we work. The existing stock of mental and moral powers and possibilities, neglected and unrealized among the people as a whole, is capable of greater service to individual and society. Stewart Paton has faith that all is not lost or hopeless: "There seem to be a good many people who are very much concerned about the question whether civilization, having reached its highest point of development, has begun to decline. Some Jeremiahs are lamenting that the human race, having passed through the period of infancy, youth, and manhood, has already reached old age. As a matter of fact, there is plenty of evidence that man is still in a very early period of his development. He has always treated his brain, for example, very much in the same manner that a child does a complicated toy, and he takes little trouble to find out how to use this organ to the best advantage. Like a child, he has done a good deal to impair its efficiency, and he only appeals for aid in learning how to manipulate it after serious damage has been done to the machinery." The Princeton psychologist says that "One result of this childish attitude has been the development of a sentimental and rhetorical, but not intelligent, interest in discussing the matters affecting his welfare such as peace and sanity, while he actually undertakes very little in a sane way to find out which processes should be cultivated and which eliminated, in order to develop a rational and peaceful attitude of mind. He wishes intemperately for international peace and sanity, but he takes few steps based upon any scientific knowledge of human behavior to bring about the fulfilment of his dreams." We have by no means exhausted the possibilities of human capacity, whatever may be its limitations.

That is exactly what education means, to take human capacity and make the very most of it. We must do that regardless of the eugenic prospect, and in so doing we shall fulfil the democratic ideal.

We sometimes speak of constructive democracy. What democracy could be more constructive, more truly constructive, than that which begins with children? In a recent book, Stephen Leacock discusses "The Unsolved Riddle of Social Justice," seeking to point some way of escape toward neither the Scylla of *laissez faire* nor the Charybdis of socialism, and his final word is this: "The safety of the future lies in a progressive movement of social control alleviating the misery which it cannot obliterate and based upon the broad general principle of equality of opportunity. The chief immediate direction of social effort should be towards the attempt to give to every human being in childhood adequate food, clothing, education and an opportunity in life. This will prove to be the beginning of many things." No doubt Professor Leacock would include health among the essentials of a democracy of childhood, and construe opportunity to include opportunity for development of all inner capacities and potentialities. The road to democracy is through democracy—and through the child. There is no such thing as democracy among an unprepared people.

The child, according to anthropologists, possesses in himself "all the chief distinctive characters of humanity," and "the true tendency of the race is to become childlike." Such thinkers as Havelock Ellis and G. Stanley Hall aver that the child and the woman are the better and more adequate representatives of what is best in the race and in life. Waddle inquires: "May it not be that woman stands for the best things in life, because, far more than man, she follows the lead of the child, understands childhood better, sympathizes more with it, and appreciates it more truly?" One cannot but wonder what effect it would have on the quality of nations if nations should follow the lead of the child, spend their thought largely upon him, make him their principal object of devotion. Perhaps we should then approach to childlikeness of some sort in citizenship, statesmanship and diplomacy. Would this, after all, with its simplification in many ways of both the inner and the outer world of man, be so bad a thing? The child has been declared, on the highest authority, to be the symbol and type of the Kingdom of Heaven. It is time that the child be given his rightful place in this world and in this country. The twentieth has been called the "Century of the Child." Let us make America the Nation of the Child.

NOTES ON THE PSYCHOLOGY OF RECREATION

By G. Stanley Hall

Biology has made us familiar with the pregnant fact that evolution means specialization. In primitive forms of life a simple cell performs all vital functions—sentient, motor, secretive, nutritive and even procreative. But with the development of the soma and its organs the activity of each cell group becomes more and more limited in scope and more differentiated from others in structure, more efficient in performing its own special functions and less capable of and so more dependent upon others. Thus the corporate welfare of the whole involves ever more limitation of the range of activity of each physiological element. All know and no one denies this principle.

What we have not yet fully understood and still less accepted in its practical consequences is that precisely the same law is just as true and fundamental for human society and all the manifold institutions of civilization. The individual must give up many things and focus upon one and learn to do that ever better in order to become a true socius, and must realize that he is but a small part of an ever larger whole. *In der Beschränkung zeigt sich der Meister* (Mastery comes by focalization) is true in industry, trade, government, in every profession, in all the arts and sciences and perhaps most of all in original research. The world of today and yet more that of tomorrow will be ruled by those who know and do one thing supremely well. Thus not only to excel and to become leaders and lights in any field, but even to escape a paralyzing sense of inferiority, involves ever more renunciation of the countless other things one would like to be, do and know; and this involves progressive limitation of the ensemble of very much that constitutes personality and increasing subordination of the individual to the welfare of the group. The difficulty of finding the one thing each can do best and of duly concentrating on it in time to achieve mastery, and the consequent docility and recognition of the authority of experts in other fields, is the chief cause of present unrest and the chief peril of democracy.

Thus what to do with man's undeveloped potentialities becomes a problem of ever growing gravity. Most, save

geniuses whom nature starts early toward their own true goal, drift or circumnutate for a time till accident rather than competence determines their career; and so, later realizing that they might have done better, they come to feel that the social, industrial or political order is unjust. Thus the progressive renunciation that service under modern conditions requires inevitably breeds a growing body of discontent and distrust; and the individual cells and organs of the great community body tend to set up for themselves in a way and degree that means more or less renunciation of membership in the whole, and this involves disintegration and decadence. It is just these disruptive tendencies which were the chief psychological cause of the decline and fall of the great civilizations of antiquity and which now threaten our own as nothing has ever done before. It is useless to objurgate these trends toward individual and group selfishness, and emergency legislation can never eradicate them, for they are inveterate, if not legitimate, at the present critical stage of man's development when Teufelsdrock's clothes are both outgrown and worn out and he needs not only a new suit but new fashions based upon new measurements of human nature itself, though it is proving very different and vastly more complex than what we thought it when the old garments were made. This is the colossal task now laid upon modern man, but we are optimistic enough to believe that it will sooner or later be accomplished; otherwise we face a period of debacle and relapse to feralism, the contemplation of which is painful to face.

My modest purpose here is merely to call attention to the peculiar rôle of certain forms of diversion, which become of vastly greater significance in eras of suspense and transition like the present. Although we cannot avoid the necessity of harder and ever more specialized work of body and mind, we can and must, at least at times, turn away from it and find not only diversion but recreation in so doing. The old law, that those work best who play best, simply means that the best preparation for the severest labor is the completest relaxation. Amusement is often more than rest; it is rejuvenation. What we need is to exercise unused muscles and psychic powers and appetencies, which the conditions of modern life tend to relegate to innocuous desuetude; and this recalls the old slogan of the Turners: that a man is whole only when he plays. As many children's games and spontaneous activities are vestiges of what were once the most serious occupations of adults, so most humor, satire and amusements generally are flights from the exaction and drudgery of occupational life

to the more primitive states and attitudes characteristic of the childhood and youth of the world and of man. Without such flights from reality man loses elasticity, recuperative power, poise and even sanity, and may take refuge in real and not merely artistic illusions. Thus, to recur to the biological trope, the most highly specialized cells which have given up most of their original and general functions temporarily resume them and thus lay a broader basis for their special functions, recharged from the primeval source of energy, and are "regenerated" in the biological sense.

Mansoul contains a menagerie of primal basal traits, residues of our phyletic history. These slowly accumulate energy which sooner or later demands vent, wherein expression breaks through repressions, inner and outer, perhaps with eruptive force. Such phenomena are reversionary, when the phyletic rudimentary organs of the psyche long disused have their innings and sweep away the proprieties and conventionalities, and sometimes the virtues and even sanities, of contemporary civilization. Every state of culture has and must tolerate forms of license for these primitive propensities, and such institutions make for the safety of society, uncouth and barbaric though they often are. Great statesmen have sometimes apprehended this necessity but only inadequately, and only genetic psychology can fully explain it. The history of all, or April Fool's Day, *e. g.*, shows a tacit license for the young and the submerged classes to get back at elders, authorities, the rich or the aristocrats, by petty pranks and coarse jokes that trip up pride, position and dignity, and often humiliate and insult without stint. Little and perhaps great spites are sometimes vented in low, cunning, covert and sometimes anonymous ways. The victim may well and indeed must laugh it all off because the indignity he suffers may vicariate for graver injuries which would be inflicted on him but for this safety valve. To take as a joke what is meant to hurt and perhaps does, to appreciate ingenuity in the mode of attack, or to feign to do so, of itself abates malignity, while to have shot at an enemy with a blank cartridge that may singe relieves the ill-wisher, the desire to use a bullet is aborted, and so tension is relieved, and the object of hate is safer. So in the coarse carousals of the ancient Saturnalia, Mardi Gras and St. Valentine's Day when plebs may affront patricians and all may do all to all, the old war of all against all is fought over with padded weapons in a free-and-open, give-and-take way; and animosities and rancors, even slight and unconscious ones, are mitigated, and a more friendly feeling and perhaps good fellowship supervene. All this, of

course, is only one element in these festivals. Today all are equal, and therefore tomorrow the old inequalities are on a more stable basis. Twice I have participated in Corso fêtes, and whoever has done so must realize that to pelt and be pelted with confetti and ribbons, to tousle and be tousled in mimic fights, leaves a kindlier feeling toward both friends and enemies. The point of points is that nothing whatever must be taken seriously. We must laugh at what would perhaps ordinarily make us wince or even weep. Every instinct of resentment must be in abeyance. There must be no pain but only pleasure. Good nature and jollity must be supreme. Anger and hate are undergoing purgation on the principle of the Aristotelian catharsis. We may fight hard but it is all in play, and he who "gets mad" should get out of the game and go home to cool off alone. Three of the old humors, the black and yellow bile and the phlegm, are discharged without scathe to others and with weal to self.

Personal encounter in sport is thus an element of psychic as well as physical hygiene, and all persons should find or make a plan for it in their regimen. It keeps human metal in temper, for most of us at times spoil more or less for a fight, and we had best have it all out in the pleasure field. Thus, we can help ourselves on to the standpoint of regarding many if not most causes of actual belligerency as matters of mirth and can laugh or play them off. This habit will also make our causes of real battle not only more just but make us more effective and formidable in them, and this is a point of great weight. We enjoy mimic struggle all the more as we realize how grave the reality of it would be, and this tends to keep us from turning sour. This the soul in its innermost depths realizes to the full, for the chief charm of nagging, hectoring and bantering is to both test the temper point and depress it, and he who can bear most, always of course within certain very wide limits, without taking offence is the one who wins the appellation of good fellow, which is the masses' supreme token of approval.

In logic there are sixty-four moods or combinations of the A, E, I, O forms of proposition, but only six in each of the four figures are valid; that is, there are more fallacious than legitimate combinations. Common sense, reason and sanity admit a far less number of association and thought processes than are logically possible, and the ranges of the sportive are far wider than those of serious ones. It follows that if a philosophy of wit, humor, etc., be possible at all, which may be doubted, it must be larger and more comprehensive and can come only after we have a science of sound, sober and

permissible thinking. Thus it is not surprising that aesthetics has yet few if any final canons, and that it cannot explain or even classify all the ways in which the intellect disports itself. It is certain they cannot be elucidated in logical terms, for they are a-, extra-, if not anti-logical. To explain many of the most characteristic things of children and of wits by logical formulation is still sometimes attempted. In many aesthetic treatises, pages are devoted to explanations of all the connotations of a single jest or repartee. Up to date, almost every original *jeu d'esprit* is in a class by itself, or if it have offspring and relatives they make a group by themselves. Soundness of intellectual processes is like a small civilized oasis in the midst of an unreclaimed and varied wonder-jungle-land, where vestiges of about everything that ever was are found, and where novelties of many forms are ever springing into existence. Jokeland teems with drolls and freaks, monsters and fairies, that belong to none of the known text-book species. This land of folly has been visited and traveled by many, but mapped and its content ordered and scientifically described by none. Specimen products are found everywhere, but no one knows their pedigree, their embryology, or indeed much about their affinities. Although this land teems with forms that are new, there are also many that are older than civilization; and, what is more significant, they are offspring of psychic types of activity that are as ancient as man himself, for many things we laugh at are primitive and outgrown fashions of mentation that were solemn enough in their day. Thus, we have now a limited number of all the possible combinations of neurons and dendrites that are voted legitimate, that are selected out of masses of those that have been tried but proved unfit. Hence we see, too, that other types of rationality than ours are easily conceivable, not to speak of other types of sanity, propriety and all the rest, save perhaps virtue alone. Aviation and the telegraph would have been as much a side-splitting joke to the Ancient Greeks as ice is to the tropical savage, and so some parts of the domain of Puck and Momus may sometime be reclaimed.

We must here sit at the feet of childhood as commentators and preachers draw from each Scripture text. My petty collection consists of only a few random samples from the great book of childhood that ought to be scientifically and laboriously compiled from and for children as well as for us oldsters. Here is a rich educational mine not yet opened. In the presence of such a collection the world would grow happier if not more hopeful. Here is a paradise we have fallen

from and ought to regain. If here and in the samples that follow I have merely grouped superficially rather than analyzed each specimen, it is in the hope that even this modest anthology may help to bring this large chapter of our aesthetics back from its present vague and stale generalizations to a more concrete basis. Only when the best and truest children's sayings are gathered and jests and wit adequately inventoried, dissected and labeled, can we have more scientific laws of classification; and only then shall we realize how much more light and delight come from free spontaneous than from constrained mental activities, and learn how to let up some of the repressions that we constantly and unconsciously exercise upon the young.

From several thousand *facetiae* collected for and by me during the last ten years, which I have grouped in many ways, trying, but unsatisfactorily, to find a natural classification, I select a few typical specimens and find that many of them are abortions of trial-and-error methods of seeking to understand life. I begin these samples with selections from a large collection of funny things said by or appreciated by children because wit, though it by no means originated with them, is very often only a reversion to childish states of mind.

Soda water is sweetened wind; it tastes like your foot asleep. A museum is a dead circus. Trees have trunks to keep their summer clothes in. Do I know as much as I don't know? Medicine is bitter so we will be careful not to get sick next time. A sprinkler on a wagon is to keep boys from riding behind. Soap tastes worst when it gets into your eyes. I stepped on my tongue hard with my teeth. People laugh in their sleeve because their funny bone is there. If I exercise the calves of my legs, will they become cows when I grow up? Boys are nouns, but when they run they are verbs. Switching a whip makes the horse go, so why don't you whip us that way? Is not a wheelbarrow the effect before the cause? You want me to be clean and cold, but I want to be warm and dirty. Waking up in a hail storm, a little boy asked if he had slept all summer. Grass is the earth's whiskers. Little calves give condensed milk. My school is not a board school but is brick. If *f* means forte, *ff* means eighty. Are sausages caught like fish? Ripping up a doll's dress on Sunday is excused as not working but unworking. Seeing sawdust come out of her doll, a small girl said, "You need not chew your food so fine as that." When the temperature drops as low as it can, we have cold feet. I saw where they made horses, for they were just nailing on the last shoe. How long after they bury a person does the gravestone come up? Sneezing while saying her prayers—"Excuse me, Lord." Tell us all about Mrs. God. If God doesn't love me Satan does, and that is some comfort. Johnny's cut-off leg is in heaven waiting for him. Seeing a picture of martyrs thrown to lions—"That little lion behind won't get any." Having been told how God took Eve from Adam's side, later in green-apple time he had a pain in his stomach and said he was afraid he was going to have a wife. I have been helping God; I almost blossomed a flower for

Him. Seeing dust blown up in the street, he said, "Come and see. God is going to make another little boy." I am not made of dust or I would melt to mud in the bath. There are no more floods because God knows most of us could swim now; especially the wickedest boys would not drown. No Santa Claus!—Oh, dear, how do I know that God won't bust up next? God might have given me a better nose, for he must know how particular I am. If you die, where will we get another Sybil? I guess God kept a pattern. Sunday is God's day, and Tuesday afternoon is mama's. Roosevelt's youngest child is said to have prayed God to care for mama and each of the children, but now to take special care of himself "because papa is not feeling very well just now" (and he might have new duties thrown upon him). The child struck his hatchet into the ground, hit a stone and made sparks and shouted, "I hit the devil on the head." "Did God make that ugly woman?" "Yes." "I suppose then he thought she was pretty." "You pout so I could sit on your lip." "Then I'd laugh and you'd fall off." A child seeing a rainbow said, "That is God's necktie." I play Sunday because then I play I am a little Jew. "Mama, I dreamed I swallowed myself. Did I?" How early does it get late? I am so glad to go home that I am glad I went. Cats are noisy because they are full of fiddle strings. When your tooth aches, you get it filled; my stomach aches—can't I have some ice cream? If your feet get near the fire, won't it pop your corns? Iritis seems to mean eye-wrong-is. Does Amen mean shut up? A boy prayed for a little brother. When twins came, he thought it lucky that he had prayed but twice, or there might have been three of them. "Which of the twins are you?" "I am the one you see before you." Hearing that someone had found the Lord, he asked, "Was the Lord lost?" A guinea hen is a chicken winding itself up. I like going to school, but not staying. I never read the thirty-nine Articles, but I did better and read The Forty Thieves. A widower married an elderly wife and introduced her to his child as a new mama. The child said "Papa, they fooled you. She isn't new at all." If you can't get the doll's head off, why not take the body off?

"It is raining," said the boy. "Let it rain," said the father. "I was going to," he replied. "Have you been good?" "Just comfortable." "What did your papa say when his pipe broke?" "Shall I leave out the bad words?" "Yes." "Then he did not say anything I can tell." "Is a thing lost if we know where it is, Mama?" "No, my child." "I am so glad, for I have just dropped your silver mug overboard." The concert lady stood up and screamed and gargled (trilled) and a waiter pounded the piano. I am seasick for home. Will too much water drinking make me water-tight? "Aren't you very cold?" "I was, miss, before you passed." Faith is believing what you know is a lie. "She bangs her hair." "Is that why she has headache so much?" Etc. is a sign to make believe you know more than you do. He who never had toothache does not know how nice it is not to have it.

Such things shed light upon the rich rank stage of psychogenesis in which the best metaphors and tropes of our speech were made, and when literal was transformed into figurative language and blossomed out into symbolic meanings. Only genius, which is ideal youth conserved, can imitate it, and spurious attempts are usually readily detected. Some made by grown-ups might have been made by children and so are

germane. The laugh at them by elders must be of delight and wonder and not of derision.

The errors children commit while being broken into school work are another rich acreage of amusement to adults. Here I have a great and varied collection which might be subgrouped by topics in the curriculum and graded by age. Here, again, we realize that there are countless wrong ways and only one right one. A number of teachers have for years gathered and have sent me choice blunders of their children in recitation and examination, and as college and university dons find them. This theme is more complex but just as legitimate for psychoanalytic and genetic work as lapses in speech and writing now being so brilliantly exploited by psychologists and clinicians. I content myself here with only enough samples to indicate the genus. They serve at least to show how very unnatural and arbitrary the school topics first seem to be to the natural child.

A sentence containing bliss is—I have a blister on my toe. Coolies live in cold countries. Tattooed savages have their clothes etched on them. Posterior is Latin for bacteria. The equator is a menagerie lion (imaginary line) running round the world between two poles. The Iliad was not written by Homer but by another man of the same name. The feminine of Hero is Shero, of apostle is epistle, of Adam is madam. A synonym is a word you use in the place of another you don't know how to spell or pronounce. Ireland is full of bugs and molasses (bogs and morasses). If B. C. means before before Christ, B. A. must mean before Adam. Esau was a man in Greece who wrote parallels about the fox and the stalk and sold his birthmark for a mess of potash. The Mormons fertilize by interrogation (irrigation). When I am on my feet, I am nine; when I am on my head, six. Gastric juice is to keep the bones from squeaking. Nap is a little sleep; kin, of the same family; so napkin means a sleepy family. Trans means across, so transparent is a cross parent. He belongs to the epileptic school of doctors (eclectic or electric). The place was named Küssnicht because of Tell. A circle is a straight curved line with a large hole in the center. Gross darkness is 144 times darker than common darkness. A fort is to put men in and a fortress to put women in. "In which of his battles was Gustavus Adolphus killed?" "I think it was his last one." Gravity was discovered by Isaac Walton and is chiefly seen in September when apples fall. "What distinguished foreigner assisted the Americans in the Revolution?" "God." The feminine of cantatrice is cockatrice; of Ignatius is pugnacious. Sick is compared: sick, worse, dead. She was told to sit there for the present, but the present did not come. To Alice in Wonderland the cat vanished gradually, beginning with the tail, until only the grin was left. A mother, trying to explain spirit to her son, said it was perceived but not seen. "Oh, I understand," said the boy. "It's a skunk." Graduated sugar (granulated). I understand Wagner's music really is much better than it sounds. The rest of the pudding now, please, for you say, "Never put off till tomorrow what you can do today." The fruit of electric plants is currents. He was interested in poltices (politics). The monument was over the

leavings (remains) of General Grant. He sleeps in Beelzebub's bosom. A barbarian cuts your hair. The consecrated cross-eyed bear (cross I bear). Why do they sing the dogs' holiday last in the church? Cannibal was the name of two brothers who killed each other in the Bible. Preserved seats at the theater. Where are magnets found? In the cheese. Lukewarm water looks warm but isn't. A child prays, "I hardly think we have any father" (I heartily thank thee, heavenly father). "It said burying-ground," said the child, "but I have been all over it and cannot find any berries." A tangent: a gentleman that runs a tan-yard. The bowels are five in number: a, e, i, o and u. A noun is an organ grinder, a person plays a thing (a person, place or thing). A Harvard examination paper under Dean Briggs said, "Dante stood with one foot solidly planted on the Middle Ages, while with the other he waved a greeting to the rising sun of the Renaissance." The crocodile lives in swamps and is ambitious (amphibious). Parables: lines passing around the globe from east to west. *Arma virumque cano:* arms, man and a dog. The natural bride is in vinegar (the Natural Bridge is in Virginia). A propaganda equals a brother of a proper goose. Livingston is the source of the Nile and was discovered by Stanley. Heat expands and cold contracts; that's why in summer vacation lasts seven and in winter two weeks. "I wish history would repeat itself to me at examination." The wife of a duke is a ducky. The nose inhales odious (odorous) particles. Mediterraneans: lines passing around the earth through the poles. Veterans do horses. I want to be the thermometer (monitor) of the class.[1]

These illustrate for the most part only verbal errors. Children's sense of the comic seems to parallel, in the main, that of undeveloped man. They love practical jokes, laugh at deformities and unusual things and acts; and only by degrees, and not before adolescence, do they reach an appreciation like the adult's.

Punning is often low and easily becomes a nuisance but is elemental and of great psychological interest. No language has so many words of different meaning and often spelling and etymology that sound alike as English, especially in America where shades of pronunciation are apt to be ignored. Thus, to suggest one meaning and then snatch the mind to another and perhaps to a third is a very easy and endless source of mirth. This is done best with the affected naïveté of the child or foreigner and also to their bewilderment and possibly, to some extent, to their edification, as witness several comic primers. If every word with a distinct meaning had also its distinct sound all this would be impossible. Hence, the size of the field open to the punster is a measure of the defects of our tongue and is augmented by its absence of inflections,

[1]Buren: "Children's Answers, Shrewd, Witty, Nonsensical and Pathetic." London, 1905, pp. 267. McNamara: "School-room Humor." London, 1905, pp. 130. H. W. Brown: "Thoughts and Reasonings of Children." *Ped. Sem.*, Vol. 2, p. 358. J. M. Moore: "The Kaleidoscopic Mind of Childhood." Liverpool, 1904.

also by many words of foreign origin sounding like those of Anglo-Saxon derivation. Puns play upon phonic semblances and suggest exaggerated ear-mindedness and arrested development, and take us back and down the scale of psychic evolution. They are often, to be sure, vehicles of wit, but more often, especially if strained, provoke disgust, particularly when we laugh with pity or even want to do violence to the perpetrators of vile puns. The lowest wag feels that he has humiliated our intelligence unless we can frown him down, and if we have to smile we are vexed with ourselves as well as with him. If he really thinks his performance funny we vote him the prince of all boredom and would "take him out on a chip" as about the most unsavory of all companions, for he affronts wit itself. If to banality and to labored effort is added staleness, our resentment may rise to a high pitch and we want to hiss, hit, or throw rotten eggs. Add to this indecency, and we almost feel murder in our hearts. Such a man is an enemy of all that culture stands for and tries to lead us captive back to the realm of chaos and old night. Tastes vary, but the following to our mind may serve to illustrate the worst.

Found, a new asteroid. Faith, I would rather find a new hoss to roide. To get rid of a dog, put turpentine on his tail and he will varnish (vanish). If a man ate his mother-in-law he would be a gladiator (glad I ate her). Chicks who found an orange in their nest said, "Oh, see the orange mama laid" (marmalade). Chicks do not go to heaven because they have their necks twirled (next world) in this. A cannibal queen trims her nails every seventh year, which suggests the Odd Fellows paraphernalia (pare off her nail year). Freightmen on the top of cars are never struck by lightning because they are non-conductors. Cats are like unskillful surgeons because they mutilate (mew till late). A young man's arm is like the Gospel, for it makes glad the waste (waist) places. The French hated Wagner's Lohengrin because of Elsa's (Elsass). A negro preacher shouted the name of God because the Bible said hollered (hallowed) be thy name. How did our first parents get out of Paradise? Snaked out. What did they do when they got out? Raised Cain before they got Abel (able). Adam and Eve stopped gambling because their paradise (pair of dice) was taken away. Adam was made just before Eve. Angels were placed at the gate of Eden to keep out the damn pair (damp air). The hardest tax to raise is carpet tacks. All our presidents in a row would reach from Washington to Cleveland. Policeman's clubs are now made of wrapping paper. The Yankee dude'll do. A sculptor makes faces and busts. The cat has a purr, the stove a damper (damn purr). A bicycle cannot stand alone because it is too tired (two tired). How does the cat like the new dog? Fur straight (first rate). A donkey is not stupid for he does much brayin' work (brain work). I am not one of the masses. No, but if I leave off the m, you will be included.

Such cases seem plainly to contradict Spencer's theory of descending incongruity as to expecting the great and finding

a trivial meaning, for we often do this in such samples as the above and are not pleased but pained. They also do not at first sight seem to square with the psychogenetic theory that makes wit largely a reversion to primitive thought-forms and processes, for, although reversionary, instead of being agreeable they are the opposite. They are, however, admirable illustrations of another psychogenetic law that, although the reversion to really antique psychic states is pleasant and rejuvenating, the realization of those recently transcended is painful. We are most severe upon culture stages just cast off or left behind, as the most blatant atheist is the erstwhile believer. We were too recently in the stage when we could not laugh at such effusions. Our very sense of our growth and progress consists largely in feeling that we are now beyond all this, and there is a tang of self-pity that we did within our own memory fit it. That is why they now seem so dour. Our resentment is like that of *nouveaux riches* who hate to be reminded that they were themselves once bootblacks or washerwomen, although later the *juvabit meminisse* of it all may come to its own in their hearts. Thus, the impulse to maltreat vile punsters shows that we are not yet so secure in our new and higher standpoint as not to be ashamed to be reminded that we might yet relapse to feeling as we did as youngsters toward this stage of word-play.

Word-play greatly widens the range of the ludicrous, not only by itself being a source of mirth but also by explaining situations and by revealing the butt's state of mind. To children the mere sound of a new word is likely to be either amusing or impressive, and the same is true of adults to a considerable degree, especially to adults unaccustomed to look on words as tools. The sound often calls up other words of similar sound; that is, it starts up a tendency to rhyme and alliteration without regard to the sense of the words at all. Most children between three and six go through a period when they make strings of rhymed words, meaningful and meaningless run in together indiscriminately. Sometimes, too, they make simple verses, often suggested by the ideas associated with the automatically rhymed words. All this is very enjoyable and is often accompanied by laughter. We might perhaps carry the process back a stage farther to the lalling baby who repeats over and over the same sounds, but who also unintentionally and involuntarily makes all sorts of new and difficult combinations with the greatest enjoyment. And we should also note that older children and even adults enjoy practising such things as "Peter Piper picked a peck of pickled peppers." In all this sound-play we get something

closely analogous to tickling. First, we ourselves do not foresee how the speech-organs will react when started off nor how the reactions will make us feel, and so we listen for the result with curiosity and enjoy the slight shock of surprise. Secondly, if the accidental combination makes sense we get another surprise at our own cleverness and are more likely to laugh than in the first case; while, thirdly, if we suddenly discover two meanings we get a still deeper enjoyment. For instance, I have just been playing with sounds thus: ma, may, mi, me, mu. This naturally suggests, Ma may miss me much, at which I smile. But then I decide to make a pun, and look over the sentence for words with a double meaning. May strikes my attention first, and I say, May may miss me much. But this is old and obvious and I try to get a complete sentence of mays, without success. May may miss me much in May is the best I can do. I change it so as to bring all the mays together—In May May may miss me much, and as I write it down I realize that miss will also have a double meaning if written with a capital. Then I realize that I have just laughed. But, after all, this is not so very funny, because it does not fit into any actual situation as some puns do. One of the most satisfying illustrations of this sort is the answer made by the brakeman to the lady who asked how long the train stopped at a certain station. "Too-too-too-too-too-too," he replied. (Two to two to two two.) The answer was scientifically accurate, it consisted of just one word in varying meanings, and it imitated the characteristic sound of the train, so that for a first indignant instant the lady may have thought he was deriding her and then awakened to the fact that in truth he was flattering her by using the same terms as he would to a railroad man.

The best puns, that is, come out in the snap and flash of repartee and are truly witty. They often emphasize serious truths by summing up profound likenesses and differences in one word or phrase. When, on the signing of the Declaration of Independence one signer said nervously, "Gentlemen, we must all hang together," and Franklin responded, "Yes, or we shall all hang separately," the descending contrast between themselves leading a united country to freedom as statesmen and warriors and dangling in the nooses as traitors was surely shocking enough, and probably they laughed when they realized that the full nooses would be the inevitable result of their failure to be united and the fitting punishment of their selfishness and sectionalism, that they would really be traitors deserving death, even as their enemies asserted, but in a totally different sense. There may also have been the sense

that by signing they had overtly committed themselves irrevocably to "hanging together," and had thus won the great victory over their own doubts. Serious as the signing was it was still an occasion when tensions were released, inhibitions let down, and in the various ones present doubtless all the degrees of relaxation could be observed, from the sigh to the laugh.

That is, in a pun two meanings are hidden in one word-sound, and in proportion as they are contrasted and express truths the pun passes over into wit or wisdom. The pun combines two pleasures. As we have already seen, the delight in mere sound-play persists from childhood, and when we get it with a minimum of meaning or appropriateness we have the low forms of the pun such as children and grown persons unused to handling words enjoy. The emphasis is on the similarity of sound and little attention is paid to sense.

When, however, a new set of ideas is roused by this same sound the sudden appearance of difference is surprising and almost miraculous.

Hughlings Jackson makes two interesting comparisons. The analysis of puns is a good way to begin the study of normal and abnormal mentation, for:

(1) Vision is stereoscopic and slightly diplopic, since there are always two dissimilar images to one object. Mentation is also stereoscopic and diplopic, *i. e.*, with double consciousness, and its process is always tracing relations of likeness or unlikeness. Now, its caricature or play is the pretense of resemblance and is in these chief stages—puns, wit, humor.

(2) Jocosity thus implies some surplus mind, and it appeared in the race with play and the aesthetic sense. We can thus reason back from its appearance or not, that the man who lacks it will also lack the best scientific conceptions and perceptions of true reality (one might add also, I should think, artistic sense in all forms). Again, there is a close resemblance in insanity and morbidity to the mechanism of jocosity and a similar caricaturing of the normal process.

Word-play can be not only decent but enlivening, as witness Saxe, Hood, Lamb, etc. We have to be mildly stunned and bewildered. At the very least, this teaches us the sinuosities of our mother tongue and enables us to look down upon foreigners and children who are striving to master it.

Descendants should not descend too far. His kindness is unremitting; he sends his family nothing. When a minister resigned his parish was quite resigned. It is ten to one if you catch the twelve-fifty train. This is the woman's exchange but they do not really exchange them. Flirtation is attention without intention. *Eifer-*

sucht ist eine Leidenschaft die mit Eifer sucht was Leiden schaft. Our hotel has fire escapes; the heat escaped from my room in the night and I nearly froze. They call that horse Regulator because all others go by him. What will you talk about? About twenty minutes. I am first at last; I was always behind before. Can you eat a square meal at a round table? At our farm, we eat all we can and what we can't, we can. What would you do with a quarter of a million (quart of vermilion)? Paint the town red? Heine said he talked to Rothschild familionnairely. Let us fly said the flea, let us flee said the fly; so they flew through a flaw in the flue. Beecher's epitaph of Bob Ingersoll was, "Robert Burns." Pasteurized milk is good for babies, but pasturized cows are better. Births, marriages and deaths one editor headed hatched, matched and dispatched. Our government now hardly allows the Indian even a mental reservation. She heard the lecture on sun spots, thinking to get a cure for freckles. The kind of dress little Egypt had on was knit. A Zulu belle is like a prophet, for she has little on her (honor) in her own country. The light fantastic tow (toe) is very blond hair. A made-up woman is like a fall in the mud, for the first is a sham dame and the other is a damn shame. The difference between a wool dyer and a lawyer is that one is a lamb dyer and the other is a damn liar. The difference between a tube and a drunken Dutchman is that one is a hollow cylinder and the other a silly Hollander. Beware the dog—Ware be the dog? The soldier faces the powder, the lady powders her face. A corrupt official is unlike a church bell, for one steals from the people and the other peals from the steeple. Sprinting for trains is good training for sprints. The difference between an auction and sea-sickness is that one is a sale of effects and the other the effects of a sail.

The difference between hitting a man and killing a pig: one is 'saulted with intent to kill, the other killed with intent to salt. Between temptation and infinity: One is the wile of the devil, the other a devil of a while. Between opium and Abraham: one is the juice of the poppy and the other the poppy of the Jews. Between the Czar of Russia and a barefooted boy: one issues manifestoes and the other manifests his toes without his shoes. Between an ordinary and an extraordinary professor in Germany: The ordinarius never does anything extraordinary and the extraordinarius never does anything *ordentlich.* Between a prairie and a toy demon: One is a dead level and the other is a lead devil. I traveled with the lady *tête à bête.* Mr. Biggar had a son, a little Biggar. Oh, *luce uri is reddas minis,* and *minis reddas a dux nos. Gymnasticus pax his nos mittis tum an fingar.* If a lawyer should only charge a nominal fee it would be phenomenal. Marriage is not a failure, Ikey; but if you marry a rich girl it is almost as good. Your Honor, when this crime was done he was rocking the cradle and we will prove a lullabye (alibi). Once my hair was curly and my form straight; now my hair is gone and my form is curly. "Did you see Smith's astral body at the seance?" "No, only his jackastral body." Is it an incubus or a pen and incubus? The first daughter was named Kate, the second Duplicate, the third Triplicate and the fourth Syndicate. The crazy Bavarian King Leopold was so much under the influence of a lady named Cleo that he was called Cleopold. If you dam a river you boom it; if you boom a town you damn it. A boy went to college to be a minister, but turned out a horse trader and thereby brought far more souls to repentance. It is bad to know so much that is not so. A dissipated man returned after years of travel with a wedding ring. "Are you really married?" he was asked, and he replied, "*Trauring* (*traurig*) *aber wahr.*" He has a great future behind him. The com-

ing of the crow's foot is the going of the beau's foot. A Papal bull you must believe or be excommunicated, but an Irish bull you may believe or not. The quick and the dead: the quick gets out of the way of the auto; but if he does not, he is dead. No aspiration is realized without perspiration. "In one thing all women are alike," said Mike—"in being different." Some do not go through college; it goes through them. One of Napoloen's first acts was to rob the Duke of Orleans. *C'est le premier vol de l'aigle.* Woman poses, God disposes, man proposes. The best color to keep a secret in? Inviolate. He is so deceitful he would pat you on the back before your face and hit you in the eye behind your back. At a ball game a boy was struck in the back of the neck, and the ball (bawl) came out of his mouth. A colored doctor said the only two things he needed to understand were laudame and calumy. It may be it is and it may be it is not and may be it is both, but I doubt it. Why do the Russians rush, the Teutons toot, the Anglo-Saxons angle, the Yankees yank, the Paddies paddle, the Hebrews brew, the Scotch scoot, and why are the French so fresh? We see all about us the footprints of an unseen hand. After his first wedding a bashful clergyman asked, "Is it cistomary to kuss the bride?" In the house of a widow who married a widower there was a great noise which she said was "my children and your children licking our children." "Why was the death of John Rogers better than that of Charles the First?" "A hot stake (steak) is better than a cold chop." By careless proofreading a morning journal described the speaker of the evening before as a battle-scared hero. He protested that he had never been frightened in any wars. Next day the paper apologized, saying that all would understand that it should have been bottle-scarred. When Lord Coleridge was in Baltimore the hotel boy was directed, when he was called, to rap at the door and in answer to the inmate's "Who's there?" say, "The boy, my lord." The boy was confused and said instead, "The lord, my boy." An Irishman took the boy's place and was directed when he was summoned to rap on the door and say, "What is it, my lord?" He said, "My God, what do you want?" To buss is to kiss; rebus, kiss again; buskin, kiss a cousin; blunderbuss, kiss the wrong one; omnibus, kiss all in the room.

Laughter at obscenity and the breaking of sex regulations is one of the most puzzling things to explain, but a large part of it surely comes from this reduction of a superior to the common level. In proportion as a man claims respect and honor from others he tends to cover up his physical needs. "No man can be a hero to his valet." This is especially true of those who deal professionally with the soul, our incorporeal part; and so there is a peculiar piquancy in discovering that priest and saint have the same passions as they condemn in the sinner. So, too, woman has always assumed to be modest and indifferent and has made man beg for her favors. How amusing to him, then, suddenly to discover that she is fully as desirous as he and will seek him even as he did her. Much obscenity and blasphemy consist in bringing us violently face to face with the fact that even the most exalted and holy personages are subject to the same physical passions as the lowest slave or even as animals.

There are today and always have been people so abnormally sex-minded that everything straight suggests male and everything curved or hollow female. Phallic religions that some think once covered the earth, the prevalence of gender of about all nouns in most languages save English where this is vestigial, the collections of pure smut published by anthropologists, and finally the Freudians who see sex in all psychoses and nearly all neuroses and make its symbolization the key to wit, illustrate this.[2] Doubtless all these views are exaggerations of what is partially true. Sex is more and more veiled and sublimated as civilization advances, but yet there is a vast body of obscenities current among boys and men, some of which is pure vileness, but which evokes the coarsest of all laughter and is loathsome and corrupting. This is about the only theme in which mere grossness with no flavor of wit or humor provokes the guffaws of brutal men. Be only shameless and indecent, and the groundlings applaud. It is just this tendency that keeps alive a vast body of filth that both law and decency strive in vain to suppress. No condemnation can be too severe for those who vulgarize the sublime and sacred facts and truths of sex. On the other hand, there is a body of really brilliant things that have happened and been said in this field which, although a bit risqué, true gentlemen may and actually do enjoy when they are together, whether they should do so or not; and some of this is, after careful expurgation, too good to be lost, and for it there should perhaps be occasional times and places. Were our modesty so prim as to banish everything essentially comic here because it contained faint innuendoes of the forbidden, the domain of wit would be materially narrowed. Moreover, who shall say that men do not, especially the mature and aging, find here a vicarious vent and function that discharges tensions that might otherwise become more sarcous and scortatory? Real wit may have some license, then, in this delicate realm if it has some genuine disinfecting power. It must be very brilliant indeed to justify any degree of rankness but it does have some rights, like art, for its own sake even here. At any rate, theory and pretence, if not actually hypocritical, are in about all men at great variance with practice here. If this seem dangerous doctrine it is because only very acute psychological analysis can distinguish how many ingredients of filth and how many of pure wit and humor are contained in a given concoction. Another trouble is that wit has rarely ranged

[2]Freud: "Der Witz und seine Beziehung zum Unbewussten." Leipzig, Deuticke, 1905. 205 p. See also my "Educational Problems." N. Y., Appleton & Co., 1911. Vol. 1, p. 392 *et seq.*

itself on the side of purity and against vileness, but its lesson is one of rather easy toleration. It is probably more likely to be alluring than satirical or castigating, more enticing than censorious. One of the worst results of too much acquaintance with most current drolleries of this kind is that they can hardly fail to interfere with the idealization of woman, who is too often represented as sensuous and full of secret duplicities and anything but true and pure. Vile things here once heard tend to be perpetuated in memory like almost nothing else. Clever moral tales and *bons mots* generally are forgotten, but not lascivious ones. For these infections human nature seems to furnish no antitoxin. The hearing of a ribald thing is liable to maculate the virginal purity of the mind forever. Each age, nation and social stratum has its lines pretty exactly drawn between the forbidden and the permissible, and near these the tension both ways toward more strictness and more laxity is greatest.

Why do we tend to laugh at what offends modesty? Freud answers that improper things were originally said in the presence of women as expressions of man's instinctive tendency to encroach upon her reserves and reluctance. Transgression of conventional lines between the licit and the nonlicit, he says, is a form of man's instinctive aggressiveness, of the first stages of his attack upon female virtue, and may moreover act aphrodisiacally upon her desires. It stands for the first lesson in the arts of seduction. It is the first step toward undermining the outer fortifications, and it may end in the capture of the citadel. This is an ingenious and more or less plausible genetic theory, but we can hardly accept it as more than partial, for why do men take such delight in these things when alone? Is this secondary and derivative, as he avers? This seems doubtful, for such converse both mildly stimulates and vicariates for real indulgence. It can be psychoanalytically only an attenuated form of mental masturbation, even though it can make but little headway. It adds to the store of sex images and perhaps proxy expressions, and increases, intensifies and widens the sphere of sex-mindedness. If this is, as most hold, already overdeveloped in modern civilized man, this tendency is predominantly corrupting. I append only a very few of the least unfit from a mass of all sorts, many of which it would be a crime to print.

There are all kinds of doctor specialists, some for the eye, some for the ear, lungs, throat, nose, etc., but none for the umbilicus. Yes there are; the naval doctors. A woman had an illegitimate child and excused herself because it was so small. "She raises her dress too high on the street." "Yes, a little above two feet." In a measles epidemic

the children were daily questioned as to illness at home. A little girl stayed out one day and was asked if any one was ill. "Yes," she said; "we had a baby, but the doctor says it isn't catching if you are careful." A country girl going to the city heard the first night a lecture by Bob Ingersoll on religion, the second night one by Ignatius Donnelly on Shakespeare, and the third night one by Jeness-Miller on dress reform, and wrote home, "I have lost my God, my Shakespeare, and my underclothes." The city council discussed the proposition of putting a dozen gondolas on the lake in the common. One member arose and said with great dignity they must economize and there was no need of a dozen. "Get one male gondola and one female gondola and let nature do the rest." A man slipped up on an icy walk at the top of a hill and slid down, tripping up a fat woman from behind, who perforce sat upon him; and thus they slid to the bottom very swiftly. Both were confused and almost stunned, but he finally mustered consciousness to say, "Will you please rise, madam? This is as far as I go." O woman, in our hours of ease so silent, coy and hard to please, but seen too oft, familiar with thy face, we first endure, then pity and embrace. When a chair factory was burned in Holden some of the repair work was done in private houses, one of which hung out the sign, "Damaged boys' bottoms repaired." It was opposite the schoolhouse. Why is a nurse? Because Mumm's extra dry. A proper study of mankind is Venus Aphrodite. They watch her transit from club windows. The colored man went to a druggist for a cure for a vile disease and when the bill was presented asked: "Do you make a reduction to ministers of the gospel?" This is a girl like Dreyfus; the army does not believe in her innocence.

Wit seems to have trained its sharpest weapons on woman. Her form, dress, fashions, passions, caprices, and most of all the traits of those who remain unmarried have been made subjects of endless jokes of every quality of wit, ranging from mere dalliance and tantalizing to bitterness and rancor. Strangely enough, woman has not retaliated and shows hardly a trace of any desire to make man ridiculous in return. The feminist should look into this, for by general consent her tongue can be as sharp as man's. She will admit and man will not dispute that he is intrinsically no whit less absurd. Her subjection cannot cease until she has righted this inequality. The old bachelor is quite as, if not more, preposterous than the old maid; and the woman-hater is as bad as the man-hater, while the woman impersonator of man is perhaps almost as successful as the man impersonator of woman. If a woman be mother, especially if she be nursing, she has always, to the great credit of mankind, been almost absolutely exempt from wit; but the farther she stands from this maternal function the more exposed she has always been to the barbs of comedy and even of satire. Amidst the war of sex against sex this has its lesson, which is that maternity is the holiest of all holy offices. Love itself is sometimes derided but maternity never. Perhaps nothing else in the world is so immune.

No woman ever got cold if she felt herself well dressed. An Italian maid stilletoes her false lover. A Spanish maid gets her bravo to kill him. A German girl sheds copious tears and writes poems. The French girl if jilted tosses her head and says there are as good fish in the sea as were ever caught, and sets her cap for another beau. The American girl sues for heavy damages for breach of promise. There's a gladness in a woman when she's glad; there's a sadness in a woman when she's sad, but the gladness and the sadness are not in it for a minute with the madness of a woman when she's mad. Man's first sleep became his last repose. For Eve was made out of the crookedest part and flirted with and cross-examined the serpent. She has traveled in Europe, and while not much of a linguist has learned to say "Yes" in seventeen different languages. The ideal fireman should be like an old maid, ever ready and never wanted. I popped the question, and I have the refusal of her.

Religion and all its institutions have from antiquity down been a theme of wit, biting where it was disliked and pleasant where it was favored. I know an old farmer who offered to bet he could tell two hundred "Minister stories." Those I heard usually made the clergy mildly ridiculous, and yet the old man always attended church and with deference. Just as sex jests may be really witty and yet very indecent, so those on the theme of piety may be witty though very sacrilegious. But as witticisms on sex tend very strongly to be simply nasty and witless, so those on religion tend to be simply blasphemous, although this latter tendency is vastly less developed, restrained as it is by its associations with death and the next world. What makes the skeptic laugh makes the devout shudder. Of the professions, doctors come next as butts of wit and lawyers third, for they are a little less close to the life of the folk, but a volume could be compiled of gibes of every quality against each.

The English excel all nations in taking the gospel to heathen lands. Soon the heathen have the gospel and the English the land. A prayer-meeting began by singing "What shall the harvest be" and ended by singing "Nothing but leaves." "Nearer my God to Thee" is played to a waltz tune. Since these Baptists began to wash off their dirty sins in my ponds my cattle have been poisoned. Taft said that the Christian Endeavorers did not succeed with the Filipinos because they did not wear clothes enough to pin a badge on. God may love all, but He doesn't admire all. A negro was converted because when drunk he saw angels and devils teetering on a gravestone. Said a fat convert wheezing up the aisle, "I weighs three hundred and seventy-eight pounds, and every pound is for Jesus." We call that fish a baptist because it spoils so soon after coming out of the water. A very pious bankrupt was almost starving but on opening his Bible found a twenty-dollar bill which he thanked God for and thought a direct response to his prayer. After spending it, it was found to be counterfeit, and he was arrested, and his faith was shaken. Why are young converts like bumblebees? Because they are biggest when first hatched. The title of a tract was "Go to hell, by the author of Come to Jesus." "I thought he was a Christian." "He is, but I guess he don't work much

at it." "I will ask Bacon if he wrote Shakespeare the moment I get to Heaven." "What if he isn't there?" "Then you can ask him." A quarrelsome man had broken up church, Sunday school, etc., and one night at a prayer-meeting when he was absent the pastor prayed he might go to hell. When a committee remonstrated, the pastor explained that he wanted him to go there to break up the institution. After hearing a temperance lecture, an old man said there was only one mention of water in the Bible, where the man in hell begged for one drop. The Southern negroes sing about golden slippers and go barefoot. They sing "Give me Jesus and you take all the rest"; and the white man has taken them at their word. Each boy in the Sunday school must contribute a penny and at the same time say an appropriate verse. One chose, "He that giveth to the poor lendeth to the Lord." Another said, "The Lord loveth a cheerful giver." The third, "A fool and his money are soon parted." As Goliath fell he said, "Such a thing never entered my head before." The cock wept thrice, and Peter went out and crew bitterly. A man was refused entrance to Heaven by Peter, whereupon he imitated a cock-crow. Saying, "Say no more about it," Peter immediately let him in. A baker built in a tombstone as the basis of his oven, and all his bread has "resurgam." Survivors of a lost vessel in a boat desired to be religious; but they had no Bible, no one could pray, and so all they could do was to take up a collection. A peasant woman in hell asked Saint Peter to get her out, which he promised to do if she would tell one generous thing she ever did. She declared that she gave a carrot to a poor woman in a famine. Soon an opening appeared in the very zenith of heaven, and a carrot was let down to her. She grasped it and was slowly lifted out of the vast sea of hell fire. As she went up, others clung to her garments and still others to theirs, until it seemed as though there would be a general delivery of all the lost souls. As she was just on the threshold of heaven, the weight was so great that she feared she would lose her hold and so turned to those below and cried out, "This is my carrot." This egoism caused the support to break, and all fell back into hell forever because of the selfish word "my."

A recent convert who had been very profane began to testify to his experience in prayer-meeting by saying, "The Lord has done great things for my soul." "Please speak a little louder, brother," said a hearer. He repeated the sentence, when another still farther back and later yet another called upon him to speak louder. At last, being angry, he shouted the initial sentence at the top of his voice and called, "Damn it, did you hear that?"

In an intense drought in Chile the town council in solemn conclave voted, "Whereas, the Supreme Ruler of the universe has not been properly attending to his functions of late, that if it does not rain in one week all the churches shall be closed; if not in two weeks all priests shall be unfrocked; if not in three weeks they shall be shot; if not in four weeks all the churches shall be razed to the ground and a commission sent abroad in search of a better religion." It rained the next day.

The Presbyterians write their sermons. The Methodists do not because the devil would have time to suggest objections, whereas when the Methodist begins, the devil himself does not know what he will say.

A missionary talked vividly of hell fire as the devil's kingdom to the Eskimos, when the thermometer was forty degrees below zero. His hearers afterwards asked him for directions to the infernal region, where they wanted to go to get warm.

A clergyman had a donation party and a baby born the same week. A bet was on, which he would mention in his prayer. He thanked God for the heavenly succor (sucker). Which was it? A church had several

students preach until they felt they had been calf-pastured long enough. The age of Queen Victoria showed the efficacy of the prayer "God Save the Queen." Negro preacher: "The Bible says, she heard Paul preach, grew sleepy, fell out of the window, broke to pieces, they picked up seven basketfuls, and all the five thousand did eat and were filled. Whose wife shall she be in the resurrection, for they all had her to eat?" A colored preacher: "There will be weeping and wailing and gnashing of teeth." "I ain't got any teeth." "De Lord will provide." A negro preacher's text was, "God gin us His only forgotten Son," and told how He was forgotten. A clergyman on a voyage strove to stop swearing among the seamen, but a terrible storm arose and, having heard that there was little danger as long as the sailors swore, peeped into the forecastle and returned, saying to his wife, "Thank God, they are swearing yet." Girard College excludes clergymen. A man wearing a white necktie was once stopped by the janitor. He swore violently at this functionary, who very politely stepped aside and said, "Walk right in, sir." A man went to hear Joseph Cook, thinking all the time it was Mark Twain. When asked if it was funny he replied slowly, "Yes, funny, but not so damn funny." "Yes, the Bible says teach the gospel to every critter, but it don't command every critter to preach it." "Our minister asked me if I ever played cards on Sunday, and I said 'Get thee behind me, Satan.'" A dignified New York clergyman brought his wife into a train in the subway and placed her in the front seat and stooped to kiss her goodbye before leaving himself. But the car started so suddenly that he kissed a pretty girl ten seats back.

The liberties taken with death are quaint and pathetic. The King of Terrors is rarely made a grim jester, as by Holbein, a skeleton grinning as he mows down people at the most inopportune moments, tripping them up into the grave in the midst of every revel. But all the accessories, coffins, corpses, shrouds, funeral service, burial, are spun over with grotesque jocularities. Man laughs at death with great glee and gusto while he can, as if to avenge himself in advance for the inevitable. Of all creatures, man alone knows he must die, and from a philosophical point of view death is the most ridiculous and absurd thing conceivable and one of the hardest to realize, even for our friends. Men have died with, in, and for a jest, although the laughter on this theme is nearly always a little hollow and affected. But why should it be? If we fully believed in eternal bliss to come the hour of our demise would be the jolliest of all, and we should welcome possibly even the most hideous form of death with a shout of joy and triumph, as did the early Christian martyrs. Perhaps we should do this too if we lived out our life to its physiological end and died naturally and with all our powers at once, with no mortuary pain or ceremony. It is more reasonable to laugh than to weep at it. Again, as with God and sex, the joker takes especial pleasure in the shock he inflicts and forces his laugh if others are silent. In fact, on this theme real wit is almost silent but humor leads and marshals countless

drolleries about accidents to corpses, persistence of traits in life, reanimation and many ways in which poetic justice is done. Sometimes the buffoonery goes as far as decomposition and the dead burn with the alcohol they drank or are eaten by the woodchucks they have killed. Skull, bones, skin, etc., are used in fantastic ways. The soul, more subtle than brimstone fumes, has its own adventures and holds many a comic dialogue with Saint Peter, with Satan and spirits of the dead, sends messages, comes back itself in ghostly apparitions, perpetrates endless practical jokes, is reincarnated in human, animal and other forms. In the books on epitaphs[3] fun is often fast and furious and every trait of naïve and foolish fondness and falsehood is represented. No more quaint, curious and quintessential literature exists. If the gods or immortal souls laugh down on us from above, it must be at many of the *hic jacets* in which love, grief, pride, pity, truth and falsehood, and occasionally hate, are so mingled.

A widower put on his wife's tombstone: "The light of my life has gone out." Later he married again, and a wag added to the epitaph: "But I have struck another match."

Here lies Johnnie Cucopod, have mercy on his soul, O God; he would on yours if he were God, and you were Johnnie Cucopod.

Epitaph to a cowboy: He done his damndest; angels can do no more. This tombstone was raised to keep her down. Our Jimmy overate cherries and is now a cherubim. A piece of plaster fell onto the floor, and a German girl understood it to be a voice calling her dead brother, Max. A man erected a memorial window to his three wives on the principle of certain signs, so that to those who sat on the left of the church it was a tribute to Mary Smith, to those in the middle to Sarah Brown, to those at the right to Jane Williams. The head-line in a Western newspaper describing the hanging of a murderer converted at the last moment said, "Jerked to Jesus." A man's wife died, but as they joggled the coffin near the grave she came to. Later she really died, and the man followed the coffin closely, saying, "Gently! Gently!" The advertisement of an undertaker declared that he would be delighted to serve his customers. At an Irish laborer's funeral his friends contributed an elegant floral anchor which the wife mistook and asked in so loud a whisper that all could hear, "Who put that damned pick on Mike?"

Would a will made by Lazarus have been valid after he was raised? In 1700 in Dublin a criminal was hung for half an hour, but when his friends took him down and took the corpse away he revived. The friends were horrified, thought he was a ghost, and beat him to death. But they could not be tried because the victim, it was decided, was already dead by due process of law. A rich man made a long will at the end of which he commended his soul to God. The lawyer who strove to break it said he desired to speak with respect of the residuary legatee, but thought he had been treated very meanly.

---

[3] "Epitaph": being a collection of 1300 British epitaphs. Lond., Gill, 1909. 496 pp.

Drunkenness in all its degrees and forms has given the world endless pleasure. Of all the vices, it is most mirth-provoking, both for the subject and for the beholder, despite all its disgusting traits. It has a wonderfully rich vocabulary descriptive of its states and aspects,[4] many of them witty and mirth-provoking of themselves. Drinking songs describe mild inebriation as the happiest of mortal states, the most effective quencher of all trouble, and "all the bonds of friendship tighten when they are wet." Most who drink do so to be happy and exhilarated and not for the gratification of taste, and a good part of the happiness consists in escaping the repressions of conventionality and letting out impulses usually held in check. There are people whose whole nature would be irrigated and who would be enlarged and enriched by a little of the fertilization of soul that can come from this source. If we ever have a psychology of temperance it should be truer to human nature and needs than the easy and extreme doctrine of total abstinence, which is only a therapy for sots. *Tutissimus in medio ibis.* An occasional touch of vinous rollickery that gives us a vacation from the prim proprieties touches the intellect with its own peculiar spur, makes the timid bold, the sad glad, the inert alert, opens those who are shut up, gives a sparkle to wit, a bouquet to humor that makes life itself here and there frothy with folly, adds to self-knowledge by showing us and others the deeper psychology of human nature with the lid off, and lifts the soul above the dull dead level of ordinary sobriety. By letting ourselves go within the limits of moderation and a certain not too rigid degree of control we learn what we are made of and also understand charity for others. It is all an individual question of kinds, degrees, means and occasions. A touch of bibulousness, then, restrained but not restraining, may gild our droning strenuous life and bring occasional joy unconfined, sweeten bitterness, make noise seem music, and save us from the dessication of slow, over-brooding melancholy.

"I pity the man who has never viewed the world save from the low plane of ordinary sobriety." A drunkard hated water because it tasted so strong of the sinners drowned in the flood. Drink shortens a

[4] "Studies in the Psychology of Alcohol." By George E. Partridge. *Am. Jour. of Psychology.* April, 1900, Vol. XI, No. 3, pp. 318-376. A few such designations are: a bit on, off, all key holes, all sails set, back teeth afloat, bended, blowing, breezy, canonized, chirping, clear, comfortable, cosy, edge on, electrified, elevated, exalted, four sheets to the wind, gilded, glorious, happy, head on, inspired, jug-steamed, leery, limber, loaded, lively, loose, mellow, miraculous, triumphant, on the end, overstocked, primed, pruned, pushed, salubrious, scammered, smoled, spiffed, sprung, stewed, stimulated, tired, twisted, yappy.

man's days. Stop it and each day seems ninety hours long. "Well, stranger, you wouldn't ask me how to cure a cold if you lived in this state (Kentucky)."

A man fell sick. His doctor commanded him to give up liquor. He got well; lived ten years; fell sick again; dropped smoking by command, and lived five years. And so on until at last, having no more sins to give up, the doctor told him he must prepare for death.

An old sot called on a doctor to sell his "ca'cass," when he was through with it, for twenty-five dollars down. He said it had been half preserved in spirits already, but the doctor beat him down, saying that he had ptosis, had lost his hair, teeth, broken several bones, and that his skeleton was doubtless brittle. He finally made the purchase for five dollars, with which the old man got so drunk that he died. An ancient maiden rode to a distant town in a freight wagon, sitting on a coffin box. A half drunken man whom they met frantically stopped the team, shouting, "Your corpse is out!" The friend of a colored cow doctor said that the doctor's medicine always drove out the disease but that the cow died of the medicine. Dr. K. had a broken jug in which he put remnants of all his drugs, and when any patient called whose disease he could not quite recognize, he gave them a dose of this mixture. A man received an unintelligible letter. An apothecary friend saw it and put it up as a prescription, thinking he had got it right.

The American type of mind, probably more than any other, enjoys pure exaggeration. This is undoubtedly bred in our atmosphere of freedom. Let every concept go as far as possible before the reductive in Taine's sense is allowed to check it. Some thing or person is so big or so small, fast, slow, hot, cold, or anything else that—is the formula; and then comes the absurd and extravagant characterization. This type of funniness, although we did not originate it, has been vastly more developed in this country than anywhere else. Europeans at first could not understand Mark Twain. They pitied the jumping frog who could not win because his stomach had been filled with shot, and saw nothing to laugh at and brought their critical faculties to bear on the literal impossibility of such waggeries, which, however, we have slowly taught them to appreciate.

It was so hot that an egg a boy dropped on the doorstep fried instantly. The wind blew his hair out and would have pulled his front teeth, had he not kept his mouth shut. He was so thin that he never knew whether he had stomach ache or back ache. He was so tall that his feet got cold and froze before his head knew it. The train went so fast that the telegraph poles looked like a fine-tooth comb. The Ganges water is so bad that microbes cannot live in it. She scrubbed the floor so hard that she fell through into the cellar. The soil is so poor they have to fertilize the graveyards to insure a resurrection. It is so muddy in Keokuk that when a man was about to kick a hat on the street the voice of the wearer called up, "Don't, my head is in it and I am standing on the top of an omnibus." A golf player swore at his errors and his wife induced him to put a pebble in his pocket at every oath. Late one holiday he toiled home, unloaded all his pockets of tiny stones, threw down two bags of them he had carried on his back. "These," he said,

"are the darns; the damns are larger stones and are coming home on freight cars tomorrow." He was so black that when he entered the room at noon they had to light the gas. He made a trust of and owned all the canals on earth and got the option on those in Mars. It was so cold the words he spoke froze up to thaw out next summer when no one was around. The flock of pigeons made noon seem midnight, and people got lost and lit matches to see their watches. When aviation really arrives, they will have to legislate to keep open spaces like commons in the sky to save the city gas. The smoke was so dense they cut it into cubes for paving stones. She was so sour-faced that if she looked at an orchard the cider press could get nothing but vinegar from the apples that grew there. Her hair curled so tight she could not shut her mouth. Her teeth were so crooked she used them for cork-screws.

A man trained fish to live a minute, two, five, ten, etc., out of water to demonstrate evolution. Finally, he could carry it for hours and hours in his pocket and at last one day after it had become thoroughly acclimated to air it flopped out into the water and was drowned. A calf swallowed a new stem-winding watch and lived to grow up. When he was killed, the watch had not grown to a big one but had so stuck in the throat that the friction of swallowing had kept it wound up and it was still going. A farmer was so ashamed having voted the wrong ticket that the next summer he sheared his sheep beginning with the tails instead of the head because he could not look them in the face. A fat man was stuck in a small place in a cave where they at last left him to die. He then thought of how he had once voted the wrong ticket, and he felt and became so small that he crept out easily. He smoked a pipe the bowl of which was so big he fell into it and was burned to a cinder. R. no longer wants the earth since he has learned that it is the smallest of the planets. A Chicago man dried snow and sold it for salt. A painter painted a cork that looked so much like marble that it sunk in water like stone. "I feel like the wandering bung-hole of an uncreated barrel." A man, stopping in a Western hotel, was given a big, tame rattle-snake in place of an alarm clock. In the night, aroused by a din, he found a burglar with the snake around his neck rattling for a policeman. The happiest man is one who was never born, but not one in a million has such good luck. Some people are so disgruntled that their hair does not fit. A dog jumped across a well in two jumps. A conceited man: "Waiting for a vacancy in the Trinity." A goat one day ate a fireman's red shirt. For this he was condemned to die and firmly tied to a railroad track. He soon trotted back. He had coughed up the shirt and flagged the train.

It is striking to a cultivated adult to note the keen responsiveness of a popular audience at a cheap theater where every comic turn, jest, and even gag is received with peals of laughter. A poised cultivated man may perceive and enjoy everything perhaps as well but without even once smiling. His perception is less absorbed but he hears and evaluates all as art and with more judgment, and yields less to the stage illusion of reality. He enjoys, also, the contagious enjoyment of others; yet he can laugh inwardly without doing so outwardly even while he criticizes. To him the author of a play, the whole problem of dramaturgy, as well as the audience, is a "part of the show." He does more meditation and thinks

it over afterwards. He is also experienced in life and in the theater, so that both the charm and the shock of novelty are lost. His pleasure is more elevated and diffuse and so less noisy and explosive. Instead of muscular demonstration he is spurred to new suggestiveness and his ferment is less effervescing and he cogitates rather than cachinnates; his instant feelings are more sublimated into intellect, and so he both loses and gains. He gets nearer to the viewpoint of the playwright than to the vulgarian's. It is all a part of the great *Comédie Humaine.* But his refinement must not make him obtuse to and still less censorious of all the chipperness and chaffy persiflage of all the ninnies, zanies, costers, driveling doters, and to all the contraptions and bizarreries of the stage witlings, loud and inelegant as it all may seem. He, too, has been a child and youth himself and once responded in the same way, and so he may here again get into vital touch with what man as such laughs and cries at. His sympathies should expand and not contract. If he would leave his judgment and learning at home and abandon himself to the spirit of the place he would be invigorated and refreshed and more in contact with all things human, and so less aloof, apart and desiccated. The new types of clowns like Chaplin, Arbuckle, Sennett, are American contributions which could have been made in no other land. Their drolleries are a new concoction of childish naïveté, downright imbecility and odd drollery utterly impossible in real life, and the laugh is at the original creation of a depth of preposterousness beneath the level of the lowest intelligence, the very existence of which had never been suspected before and is slowly making obsolete the old caricatures of different nationalities (Paddy, Dago, Yankee, Jew and the rest) which we so long enjoyed.

Laughter and the comic are often explained as expressions of the sense of freedom. A loose wheel the French call *gaie,* and the earth in drought is *foule.* Laughter is or should be disinterested, with no end in itself. Long before man knew law, constraint, or the beginnings of science, myth and fancy were free and happy. We love to see rules and uniformities broken. Children laugh at deformity, at the unexpected, and at all freaks of nature. We love occasionally to see things derailed and turned topsy-turvy as in hoaxes, sudden chances and surprises, and this all because we have a loathing for rigor and control. We love to see organized rational processes give way to those that are uncontrolled, emotional, whimsical, to see voluntary movements replaced by those that are hereditary, attention by inattentive liberty, the habitual by the

exceptional.[5] Darwin long seemed to many a huge joke. When we are most sportive thus we have the most intense consciousness of freedom. Caprice and abandon are prone to preposterous, rare, and perhaps almost insane things. Thus the coruscations of wit are the apotheosis of intellectual liberty where we live for the nonce in a chaotic world of chance and are utterly lawless, flouting custom, order, regimentation. This tendency may go so far as to become dangerous to authority and to institutions, as were the ancient Bacchantes,[6] but it gives elasticity, suppleness and *élan* and is a kind of infective mental inebriation. This is why laughter is most common in the young and keeps us young and spontaneous.

This view, which has a few thoroughgoing and many partial advocates, seems almost the exact opposite to Bergson's theory of mechanization. It recognizes that modern life abounds in repression, conscious and unconscious, as do the Freudians, and that these may become so irksome that we yearn at times to throw them off and revel and riot as we list, forgetful of all restraint. As Jahn and the German Turners strove to do everything of which the body was capable, take every attitude and do every act physiologically possible to our bones and muscles and make every combination of motor element, and thus to restore to the body all the powers that it has ever had but is steadily losing under our industrial civilization, so this conception of the comic if put to work would have us make every possible combination of mental elements besides the few we need, or science or criticism sanctions, in order to limber and mobilize the soul or to pick up lapsing functions and thereby to reanimate and rejuvenate. This idea is inspiring and has never been at all adequately wrought out. It does not, however, jibe with the views of Gevaert that the world is losing the power of true hilarity, for all admit that it is growing freer and therefore on this view should be gayer. Inadequate as this view is as a full and final explanation, geneticism adopts it as an important factor in its larger and synthetic theory which makes it accord well with both Bergson and Gevaert. Ancestral and decadent psychic mechanisms and rudiments are awakened and rejuvenated with intense conscious delight because they add to the present powers of man what he had in the past but had well nigh lost, and this revival would be

[5]See especially Penjon. *Rev. Philos.*, 1893, p. 113 *et seq.* Also Kline. *American Journal of Psy.*, 1907, p. 42 *et seq.*

[6]See A. W. Verrall: "The Bacchantes of Euripides." Cambridge, 1910, pp. 162.

impossible save in an atmosphere of freedom, not to say license. Again, if the world grows somber as it grows free, it is because as external restrictions are destroyed, as all admit they are in the progress of history, they are replaced by self-imposed ones, so that our servitude though now voluntary is no less severe than when it was constrained. Only if and in so far as this self-enthrallment has supervened on the world is joy abated, and how far this has gone is the question. Man has been proper, decent, judicial, and scientific but a very short time compared with the long history of his race, and he is very prone to slip in thought, word, if not in deed, the leash of conventionalities and be all himself again if only in a flitting moment, and to revert to the prelogical stage of wild fancy and the prelinguistic stage of cachinnation. He is like a potted house plant in the north that dreams of its native tropical jungle, like a domesticated stabled animal that longs to cavort, frisk and snort in the old unfenced pastures of ancient feral days, and this he does when he "gets funny." He is weary of being stable fed and wants to nibble and browse and taste again the old gamy flavor of the wild-wood and the prairie, to woo folly and "cut up" as madly as he can. Alas for him who does not and cannot thus at times renew the youth of the race in him, for cadaveric rigidity has begun.

(*To be continued in a later number*)

BOOK NOTES

Exceptional Children and Public School Policy. By ARNOLD GESELL. New Haven, Yale U. Press, 1921. 66 p.

This unpretentious little pamphlet is the best and most practical review of the vast subject known to us. In the fall of 1918 a mental survey of the elementary schools of the city of New Haven was undertaken co-operatively, and the subject, although local, is here treated in such a manner that any school board or individual can get a comprehensive glimpse of the problem without undue distraction by details. Exceptional children constitute a liability or asset which should be recognized everywhere in public policies, and this is a problem for the schools. In successive chapters the author treats of mental hygiene and the public school, a survey of 24,000 school children, subnormal mentality, superior and atypical mentality, school provisions for mentally deficient children, and exceptional school children and state policy. The pamphlet contains numerous tables and is illustrated by many cuts.

The Alexander-Dewey Arithmetic. By GEORGIA ALEXANDER. Ed. by JOHN DEWEY. N. Y., Longmans, Green and Co., 1921.

This series of arithmetics, elementary, intermediate, and advanced, arises from the realization that the mathematics taught in the schools of a democracy must function in: (1) Clear and independent thinking as a preparation for business, science, and industry; (2) Skill in mathematical computation; (3) Civic responsibility which will carry into action whatever is needed for the welfare of the community.

The Stages of Human Life. By J. LIONEL TAYLOR. N. Y., Dutton, 1921. 377 p.

The author is a member of the Royal Sanitary Institute, London, and university extension and tutorial lecturer in biology and sociology, and has given us here a very interesting book of special value and significance to teachers. His point of view is personal and developmental hygiene, but the most interesting and original part of it is a characterization of the different stages of life, the antenatal period, nascency, infancy, weaning, childhood, pubescence, adolescence, the bodily call and its control, mental growth and awakening during adolescence, to which several chapters are devoted; maturity and the parentage problem, and finally old age, mortality, and immortality. There are too few references but many quotations, and the chief value of the book consists in that it regards pedagogical problems from the paidological point of view.

The Story of Mankind. By HENDRICK VAN LOON. N. Y., Boni and Liveright, 1921. 479 p.

This book might well have been suggested by Wells, while the author's introduction suggests Patrick Geddes' Outlook Tower in Edinburgh. Besides eight colored pictures it has some scores of ruder maps and woodcuts illustrating its theme, and the type and entire get-up of the book is attractive. After a very brief paleontological introduction and another on primitive man, the book really begins with ancient Egypt and ends with the new world after the war. It is thus a kind of historic primer and is evidently addressed to students in a rather elementary grade of historic

study. The style is graphic and lively. Specialists will doubtless cavil at the many inaccuracies and personal *obiter dicta* that abound, but even the latter and the second-person style throughout add to the liveliness and picturesqueness of the story. In the chapter on Joshua of Nazareth or Jesus the author prints a letter of Aesculapius Cultellus and its reply as if it were an authentic document. The student will find plenty to criticize in a book of this kind, but it seems to the writer of this note to have high pedagogic value.

Origin and Evolution of the Earth. By ALBERT CHURCHWARD. Lond., 1921. 511 p.

The main thesis of this author is that we have yet living human beings illustrating practically every stage of the development of man from the lowest type up. Those lowest down in the scale have been often driven away into inaccessible places, especially by the nilotic Negro, as they have been driven into isolation by the stellar muthos people. Original or primary man arrived about two million years ago, and the earliest pigmoid non- or pre-totemic people are the lowest of all. Those who went South developed into the Bushmen and Hottentots; those who went West into the Negro; the eastern branch into the nilotic, the North into the non-hero cold people. All believed in a great spirit, in propitiating the elementary powers and departed spirits, had dances as sign language, knew mythology, folklore, magic, initiations, or tribal marks, and their implements were very primitive and limited. The book consists in the comparison of relics of lower existing races with those which anthropology studies, and in a description of the life and customs of the lowest existing races. Very important are the many photographs, many of which are very remarkable and shed new light upon many problems and some of which do seem to represent stages of culture practically almost unknown before.

Les Hommes Fossiles. By M. BOULE. Paris, 1921. 491 p.

This review of the elements of human paleontology, with its more than two hundred cuts, is by far the most valuable introduction to the subject that has ever yet appeared between two covers. The erudition of the author is remarkable, and in selecting the cuts and the facts stressed from far vaster material he has shown excellent judgment. The many schematic tables found in the book add very greatly to its pedagogic value so that it is a godsend to all teachers of this subject.

Prostitution in the United States. By HOWARD B. WOOLSTON. N. Y., The Century Co., 1921. 360 p.

This is volume I of a series published by the Bureau of Social Hygiene and discusses the subject prior to the entrance of the United States into the world war. After a historical background, the successive chapters are entitled: The Prostitute, Patrons and Exploiters, Segregated Districts, Vice Resorts, White Slavery, Venereal Disease, The Police, Law and the Courts, Regulatory Agencies, Constructive Social Forces, Summary and Conclusion. After reporting the results of this extended survey in 1917 the author was called to service in the war. He promises us another volume on this subject, based upon his experiences with vice during the war. At the end of the book he enumerates a score or two of reformatory agencies and ideals which he thinks, if carried out, would suppress this evil and involve a great advance in civilization itself.

Pedagogical Hints from the Results of a Survey of a San Francisco Public School of Delinquent Boys. By LILLIEN J. MARTIN. San Francisco, Mental Hygiene Publication No. 5, 1921. 18 p.

Dr. Martin in this thoroughgoing study of a large group of delinquent boys has not only recognized the importance of psychoanalysis for many of the cases but has made a study of their emotional traits and grouped them accordingly under the heads choleric, phlegmatic, excitable, stubborn, destructive, lachrymose, cruel, hysterical, moody, etc. She strongly urges the importance of analysis not only for exceptional but for all boys of this age and insists upon very varied individual treatment to be based upon such investigation.

Why We Read. By S. P. B. Mais. Lond., 1921. 211 p.

These are pithy guides to reading and epitomes of standards old and new, nine English classics, twelve contemporaries including the philosopher, Santayana, four books on the English language, and an excellent sketch of ten foreigners from Montaigne to Tolstoi.

Man In India: A Quarterly Record of Anthropological Science with Special Reference to India. Ed. by Sarat Chandra Roy. Ranchi, 1921. Vol. I, No. 1, pp. 1-88; No. 2, pp. 89-174.

This new journal promises to be of great interest. The attractive original articles are a program for anthropological investigations in India, kinship and marriage, anthropological research, human sacrifice in central India, the decline of the birth-rate in various areas of India, folklore and the folklore society, ethnographic notes and queries, Indian ethnology in current literature, with book reviews and correspondence.

Measuring Minds. By Garry and Caroline C. Myers. N. Y., Newson & Co., 1921. 55 p.

This is an examiner's manual to accompany Myers' "Mental Measuring," which is included. It is a model of simplification.

La Science de L'Education. By J. Demoor and T. Jonckheere. Brussels, Lamertin, 1922. 436 p.

This is the second and revised edition of this important and comprehensive work, the best of its kind we know of in French.

State Laws and Regulations Governing Teachers' Certificates. By Katherine M. Cook. Wash., Bureau of Education, Bull. No. 22, 1921. 244 p.

Ole Marster and Other Verses. By Benjamin B. Valentine. Richmond, Whittet and Shepperson, 1921. 117 p.

The Work of a Mental Hygiene Clinic for Pre-school Age Children. By Lillien J. Martin. San Francisco, Cal. Soc. for Ment. Hygiene, 1921. 3 p.

Mental Survey of Utah Schools and Adaptation of the Army Beta Tests. By George S. Snoddy and G. E. Hyde. Salt Lake City, U. of Utah, 1921. 28 p.

Gainful Employment for Handicapped Women. By Lucile Eaves. Bost., Women's Ednl. Union, 1921. 32 p.

The Parataxes: A study and analysis of certain borderline mental states. By T. V. Moore. Repr. *Psychoanalytic Rev.*, vol. 8, No. 2.

Opdragelse og Vernekraft. By Martin L. Reymert. Kristiania, With and Co., 1921. 82 p.

Viewpoints in Biography: An arrangement of books according to their essential interest. By KATHERINE TAPPERT. Chic., Amer. Library Assn., 1921. 69 p.

The Marking System of the College Entrance Examination Board. By L. T. HOPKINS. Cambridge, Harvard Univ., 1921. 15 p.

The Educational Screen. The Independent Magazine Devoted to the New Influence in National Education. Chicago, The Educational Screen, Inc., 1922.

This is a monthly journal representing the educational work, actual, desirable, and possible, which movies can accomplish. If it can maintain the level of excellence of the first two numbers it will be a journal of interest and value to all progressive educators.

Education for the Disabled in War and Industry. By A. G. CRANE, N. Y., Teachers College, 1921. 83 p.

The Function of Ideals and Attitudes in Social Education. By PAUL F. VOELKER. N. Y., Teachers College, 1921. 126 p.

Interest Factors in Primary Reading Material. By FANNIE W. DUNN. N. Y., Teachers College, 1921. 70 p.

Trade Tests in Education. By HERBERT A. TOOPS. N. Y., Teachers College, 1921. 118 p.

The Place of the Elementary Calculus in the Senior High-School Mathematics. By NOAH B. ROSENBERGER. N. Y., Teachers College, 1921. 81 p.

Changes in Mental Traits with Age. By FOWLER D. BROOKS. N. Y., Teachers College, 1921. 86 p.

The Misinterpretation of Locke as a Formalist in Educational Philosophy. By VIVIAN T. THAYER. Madison, U. of Wisconsin, 1921. 24 p.

Annual Report of the General Education Board, 1920-1921. N. Y., 1922. 127 p.

The Palmer Method of Business Writing (Spanish edition). By A. N. PALMER. N. Y., The Palmer Co., 1921. 95 p.

Scales for Measuring Results of Physics Teaching. By HAROLD L. CAMP. Iowa City, Publ. by the University, 1921. 51 p.

Englands Lazarettschiffsmishrauch Während des Weltkrieges. By FRIEDRICH LÜTZOW. Berlin, Meyer, 1921. 91 p.

Der Lusitania-Fall. By FRIEDRICH LÜTZOW. Leipzig, 1921. 16 p.

Unterseebootskrieg und Hungerblockade. By FRIEDRICH LÜTZOW. Berlin, Meyer, 1921. 51 p.

Proceedings of the American Medico-Psychological Association. Baltimore, The Lord Baltimore Press, 1921. 428 p.

Juvenile Delinquency. By HENRY H. GODDARD. N. Y., Dodd, Mead and Co., 1921. 120 p.

The author is perhaps our leading American authority on mental inferiority in children, to which he has made extremely valuable contributions. This theme is closely connected with delinquency, and all the many who have followed Dr. Goddard's work will be grateful to him that he has put his conclusions upon this topic in such concise and lucid form, and also that he has made it all the more concrete by so many illustrative cases. It is a work that everyone interested in abnormal children should read.

A Psychiatric Milestone: Bloomingdale Hospital Centenary, 1821-1921. N. Y., The New York Hospital, 1921. 219 p.

The opening of Bloomingdale Asylum on June 1, 1821, was an important event in the treatment of mental disorders and the progress of humanitarian and scientific work in America, and this volume tells us of the very fitting ceremonial which marked the close of the century. It very appropriately begins with a historical review by Edward W. Sheldon, followed by a very interesting paper by Dr. Adolf Meyer on The Contributions of Psychiatry to the Understanding of Life Problems and another by Dr. L. F. Barker on The Importance of Psychiatry in General Medical Practice.

Federal Citizenship Textbook. By RAYMOND F. CRIST. Wash., Govt. Printing Office, 1921. 104 p.

This is Part III of a course of instruction for the use of public schools by the candidate for citizenship and is published by the U. S. Department of Labor. It consists of a study of the Declaration of Independence put lesson-wise with the hard words explained, followed by a similar study of the Constitution of the United States, section by section, in reading lessons. We are incidentally given some account of the President's house and the Washington Monument.

The Child and His School. By GERTRUDE HARTMAN. N. Y., E. P. Dutton and Co., 1922. 248 p.

The sub-title of this book is: An interpretation of elementary education as a social process. This industrious writer ends her book with a bibliography of 850 titles or some fifty-six pages exiguously classified and limited, we believe, entirely to works in the English language. The books she cites cover a far greater range than does her text and yet we notice many omissions of articles and books that should be included in her list. Those who are familiar with John Dewey, who is constantly quoted and followed in all essentials, will find little that is new here despite its rather ostentatious display of references at the end of every chapter. To the reviewer it seems a very inadequate and one-sided treatment of a very vast topic.